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OF THE

NEW JERSEY STATE HIGHWAY DEPARTMENT

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FOR THE YEAR

1945

28

ANNUAL REPORT

OF THE

CONSTRUCTION DIVISION

NEW JERSEY STATE HIGHWAY DEPARTMENT

❦

FOR THE YEAR

1945

Annual Report - 1945
Construction Division

State of New Jersey
STATE HIGHWAY DEPARTMENT
SPENCER MILLER, JR., COMMISSIONER
TRENTON 1

T/S

December 31, 1945

Hon. Spencer Miller, Jr.
State Highway Commissioner
Trenton, New Jersey

Dear Sir:

The Annual Report covering activities of the Construction Division for the calendar year 1945 is herewith respectfully submitted.

During 1945 construction work was in progress on 20.363 miles of various types of highway improvement, 10 stream bridges, 3 railroad grade separations, and 5 highway grade separations, the total value of work actually performed in 1945 being $1,962,594.40

The above includes work performed in 1945 on the following:

1. 2.483 miles of State highway construction, 1 stream bridge, 1 railroad grade separation, and 1 highway grade separation that were started previous to 1945 and finished during 1945;

2. 2.033 miles of State highway construction, 2 stream bridges, 1 railroad grade separation, and 1 highway grade separation that were started previous to 1945, the completion of which will carry over into 1946;

3. 2.470 miles of State highway construction that was started and completed in 1945;

4. 8.119 miles of State highway construction, 7 stream bridges, 1 railroad grade separation, and 3 highway grade separations that were started but uncompleted in 1945 and will carry over into 1946;

5. 5.258 miles of 100% Federal Access Road projects that were completed in 1945.

From the above it is to be noted that contracts covering 10.211 miles of highway construction, 1 stream bridge, 1 railroad grade separation, and 1 highway grade separation were completed in 1945; also, that contracts under way covering 10.152 miles of highway construction, 9 stream bridges, 2 railroad grade separations, and 4 highway grade separations were uncompleted and will carry over into 1946.

The above is shown in more detail on the tabulations attached to this letter.

Federal Financed Access Roads

Six access road projects to military establishments and war industries were completed during 1945. Three of these were carry-overs from 1944.

This completed the Federal Access Road Program which was started in New Jersey in 1942 under The Defense Highway Act of 1941 and comprised 32 projects having a total length of 48.091 miles and represented an expenditure of $4,836,627.96.

The access road projects to Fort Dix, at Picatinny Arsenal, and on Port Street, Newark, represented valuable contributions toward the further improvement of the State Highway System. These projects have a total length of 9.882 miles and cost $2,621,162.49.

This program also included repairs made at Federal expense on Routes 4 and 34, from Cheesequake to Colts Neck, made necessary because of damage occasioned by heavy trucking with excess loads permitted by proclamation of the Governor to expedite construction of the Naval Ammunition Depot at Earle in Monmouth County.

Status of Survey & Plans

The status of surveys and plan preparation is shown on the attached tabulation.

Yours very truly,

C. F. Bedwell

C. F. Bedwell
Acting State Highway Engineer

STATUS OF COMPLETION OF ROAD, BRIDGE AND RIGHT-OF-WAY PLANS

Route	Location	Mileage	County	Estimate of Cost	Road	Bridge	R/W
1	Intersection, Communipaw Ave., Jersey City	0.2	Hudson	$ 90,000	25%	--	0%
2	Terrace Ave. to Route 4	4.0	Bergen	265,000	95%	--	95%
2	Franklin Tpk. to N.Y. State Line	3.5	Bergen	1,250,000	95%	0%	97%
3	Secaucus By-pass	1.8	Hudson	1,650,000	99%	85%	100%
S3	Route 2 to Route 6	5.8	Bergen & Passaic	7,625,000	95%	87%	100%
4	Toms River By-pass	3.0	Ocean	1,350,000	58%	04%	58%
4	Adelphia - Toll Gate Corner	2.0	Monmouth	625,000	98%	98%	98%
4	Drainage, Toms River - Lakewood		Ocean	50,000	90%	--	--
4	Somers Point - Absecon	12.1	Atlantic	4,300,000	14%	0%	0%
4	Cape May Court House Relocation	4.0	Cape May	825,000	85%	--	90%
4	Cape May Canal Bridge	0.2	Cape May	400,000	0%	98%	0%
4	Fort Lee - Route 2 (Closing Island Openings and Grade Separations)		Bergen	450,000	96%	90%	100%
4	Erie R. R. Warren Point		Bergen	230,000	100%	100%	--
4 & 22	Woodbridge - Irvington	11.7	Union & Middle.	11,325,000	10%	0%	22%
S4B	Route 4 to Oakland	10.7	Bergen & Passaic	4,550,000	30%	0%	0%
5	Columbia Ave. Extension, Fort Lee	0.5	Bergen	330,000	95%	--	95%
6	Fort Lee - Little Ferry Dualization	4.0	Bergen	600,000	95%	0%	95%
6	Union Ave. - Valley Road Widening	2.6	Passaic	580,000	95%	98%	--
6	Little Falls to Pine Brook	5.0	Essex & Passaic	2,765,000	95%	95%	95%
6	Spicertown to Mt. Hope - Rockaway Rd.	2.8	Morris	1,550,000	100%	100%	100%
6	Mt. Hope - Rockaway Rd to Morris Ave	2.0	Morris	1,345,000	95%	65%	95%
6	Morris Avenue to Denville	1.2	Morris	845,000	95%	0%	95%
6	Spicertown to Lake Hopatcong Road	5.3	Morris	3,755,000	30%	0%	05%
18	Old Bridge to Route 4	3.0	Middlesex	350,000	05%	--	--
21	Clay St. to Chester Ave., Newark	1.6	Essex	4,300,000	70%	0%	65%

Route	Location	Mileage	County	Estimate of cost	Road	Bridge	R/W
23	N.Y.S. & W. R. R. & Walkill River	0.2	Sussex	530,000	80%	35%	90%
25	Skyway to Port St., Newark	2.7	Essex	5,200,000	20%	0%	95%
25	Port St. to North Avenue	3.6	Essex & Union	2,625,000	100%	100%	100%
25	22 Grade Separations (Elizabeth to New Brunsw)		Union & Middle.	6,325,000	55%	10%	55%
25	Burnett St. Grade Separation, New Brunswick	0.5	Middlesex	500,000	10%	0%	10%
25	Route S-26 to Deans (Dualization)	4.6	Middlesex	575,000	99%	100%	--
25	Cranbury to Hightstown (Dualization)	5.6	Mercer & Middlesex	600,000	99%	99%	--
25	Robbinsville to Bordentown	6.2	Mercer & Burling.	1,000,000	84%	0%	50%
25	Cooper River to 12th Street	1.0	Camden	730,000	98%	80%	98%
25	Baird Avenue Separation		Camden	380,000	40%	0%	36%
25A	Passaic River Bridge	0.6	Essex & Hudson	5,070,000	28%	55%	0%
26	Extension thru Trenton	3.2	Mercer	5,600,000	22%	0%	05%
28	Still Valley to Clinton	13.5	Warren & Hunter.	7,650,000	10%	0%	0%
28	Annandale Relocation	1.8	Hunterdon	900,000	98%	90%	--
28	Middlebrook Bridge	0.2	Somerset	90,000	95%	95%	--
28-29	Connection, North Branch to Somerville	2.5	Somerset	1,500,000	95%	98%	98%
29	Somerville to Chimney Rock Road	3.2	Somerset	1,400,000	83%	15%	95%
30	Trenton to Pennington	4.7	Mercer	1,000,000	25%	0%	60%
S31	Branchville - Ross' Corner	2.1	Sussex	550,000	100%	--	100%
35	Laurence Harbor - Keyport	4.0	Middle. & Monmouth	3,420,000	92%	0%	92%
36	Broadway to Oceanport Ave., Long Branch	0.5	Monmouth	280,000	30%	--	25%
S41	Palmyra - Kings Highway	5.6	Camden & Burlington	1,200,000	92%	0%	97%
43	Absecon By-pass	5.0	Atlantic	2,430,000	75%	10%	97%
44	Westville - Pierces Corner	3.0	Gloucester	1,550,000	98%	98%	98%
44	Pierces Corner to Paulsboro	3.6	Gloucester	2,230,000	72%	0%	75%
44	Paulsboro to Bridgeport	6.4	Gloucester	3,390,000	92%	05%	97%
44	Bridgeport to Nortonville	2.0	Gloucester	200,000	99%	99%	--
45	Haddon Avenue Separation	1.0	Camden	1,200,000	18%	0%	30%
49	Maurice River Bridge	0.1	Cumberland	350,000	--	95%	--
49	Bridgeton - Millville Drainage		Cumberland	300,000	100%	--	100%

Route	Location	Mileage	County	Estimate of Cost	Road	Bridge	R/W
S49	Grassy Sound Bridge	0.5	Cape May	1,000,000	100%	100%	--
54	Route 43 to Route 48	12.4	Atlantic	2,650,000	59%	0%	85%
56	Absecon - Atlantic City	5.0	Atlantic	1,100,000	05%	0%	--
100&S100	Rt. 25, Metuchen, to Rt. 25, Elizabeth	16.5	Middlesex & Union	20,000,000	04%	0%	0%

SUMMARY OF CONSTRUCTION
BY
NEW JERSEY STATE HIGHWAY DEPARTMENT
DURING 1945

MILEAGE & TYPES OF PAVEMENT				NUMBER OF BRIDGES			VALUE OF WORK ACTUALLY PERFORMED DURING 1945				
CONC.	BIT. CONC.	GRAVEL OR MACADAM	TOTAL	STREAM BRIDGES	GRADE SEPARATIONS		ROAD	STREAM BRIDGES	GRADE SEPARATIONS		TOTALS
					RAILROAD	HIGHWAY			RAILROADS	HIGHWAYS	
1. STATE HIGHWAY WORK STARTED PREVIOUS TO 1945 WHICH WAS COMPLETED IN 1945							$166,869.13	$7,554.17	$195,760.33	$9,728.98	$379,912.61
1.385	1.098		2.483	1	1	1					
2. STATE HIGHWAY WORK STARTED PREVIOUS TO 1945 WHICH CARRIED INTO 1946							431,745.81		16,044.23	45,218.12	493,008.16
1.138	0.895		2.033	2	1	1					
3. STATE HIGHWAY WORK STARTED AND COMPLETED IN 1945											
	2.470		2.470				208,235.74	76,005.50			284,241.24
4. STATE HIGHWAY WORK STARTED IN 1945 WHICH CARRIED INTO 1946											
7.142	0.977		8.119	7	1	3	254,793.10	426,910.77			681,703.87
5. FEDERAL ACCESS ROAD PROJECTS											
STARTED PREVIOUS TO 1945 AND COMPLETED IN 1945											
	0.052	3.519	3.571				86,126.03				86,126.03
STARTED AND COMPLETED IN 1945											
	1.687		1.687				37,602.49				37,602.49
9.665	7.179	3.519	20.363	10	3	5	$1,185,372.30	$510,470.44	$211,804.56	$54,947.10	$1,962,594.40

NEW JERSEY STATE HIGHWAY DEPARTMENT
CONSTRUCTION DIVISION

CONSTRUCTION UNDER WAY IN 1945

ROUTE	SECTION	LOCATION	COUNTY	TYPE OF PAVEMENT - MILEAGE			TOTAL MILEAGE	ADJUSTED CONTRACT AMOUNT			AM'T COMPLETED PREVIOUS TO 1945	AMOUNT COMPLETED IN 1945	AMOUNT TO BE COMPLETED IN 1946	DIST.
				CONCRETE	BIT.CONC.	GRAVEL PEN.MAC.		ROAD	BRIDGE	TOTAL				
		CONTRACTS CARRIED OVER FROM 1944												
S-3	1	ERIE R.R. & BERRYS CREEK VIADUCT	BERGEN	0.139			0.139		$ 869,810.07	$ 869,810.07	$ 674,049.74	$ 195,760.33		BR.
S-3	1	EXTENSION OF ERIE R.R. & BERRYS CR. VIADUCT	"	0.053			0.053		122,197.91	122,197.91	114,643.74	7,554.17		BR.
S-3	1-D	COMPLETING PAVEMENT & RT. 3 BRIDGE	"	1.193			1.193	$ 173,374.65	42,834.02	216,208.67	103,105.04	113,103.63		NO.
4 & 34		CHEESEQUAKE TO COLTS NECK REPAIRS (DA-NR 12)	MID. & MON.					97,399.05		97,399.05	60,030.00	37,369.05		MT.
24&24N	22&1	PHILLIPSBURG BRIDGE APPROACH	WARREN	1.138	0.455		1.593	642,782.71	69,811.50	712,594.21	114,449.15	493,008.16	$ 105,136.90	SO.
25-A		DEMOLITION OF BUILDINGS, EAST NEWARK	HUDSON					19,963.00		19,963.00	8,384.46	11,578.54		NO.
31	11	ANDOVER	SUSSEX		1.098		1.098	82,162.54	4,368.00	86,530.54	71,983.65	14,546.89		NO.
* 56	1	BEACH THOROFARE BRIDGE, ATLANTIC CITY	ATLANTIC		0.440		0.440	131,527.99	1,033,777.16	1,165,305.15	621,989.29		543,315.86	SO.
		CLEANING GREYSTONE PARK RESERVOIR (I. & A.)	MORRIS					(Not Included in Totals Below)		16,682.55	14,812.35	1,870.20		NO.
		ACCESS ROADS TO MILITARY ESTABLISHMENTS (100% FEDERAL MONEY)												
DA-NC	11	CLOSURE ROADS (EARLE NAVAL DEPOT)	MONMOUTH			1.931 G	1.931	48,895.51		48,895.51	12,710.00	36,185.51		SO.
DA-NR	13	LAKE DENMARK	MORRIS			0.359 PM	0.359	18,163.60		18,163.60	2,007.00	16,156.60		NO.
DA-WI	19	CONSTABLE HOOK	HUDSON		0.052	1.229 PM	1.281	58,803.42		58,803.42	25,019.50	33,783.92		NO.
		STATE HIGHWAY CONTRACTS COMPLETED IN 1945		1.385	1.098		2.483	$ 372,899.24	$1,039,210.00	$1,412,109.24	$1,032,196.63	$ 379,912.61		
		STATE HIGHWAY CONTRACTS CARRIED INTO 1946		1.138	0.895		2.033	774,310.70	1,103,588.66	1,877,899.36	736,438.44	493,008.16	648,452.76	
		ACCESS ROAD PROJECTS COMPLETED IN 1945			0.052	3.519	3.571	125,862.53		125,862.53	39,736.50	86,126.03		
		TOTALS		2.523	2.045	3.519	8.087	$1,273,072.47	$2,142,798.66	$3,415,871.13	$1,808,371.57	$ 959,046.80	$ 648,452.76	
		CONTRACTS AWARDED IN 1945												
S-3	5	DEMOLITION OF BUILDINGS, RUTHERFORD	BERGEN					740.00		740.00		740.00		NO.
4-N	10B	NORWOOD AVENUE, DEAL	MONMOUTH		0.977		0.977	142,962.43		142,962.43		3,050.00	139,912.43	SO.
6	3	STORM DRAIN - LEONIA & FORT LEE	BERGEN					9,365.28		9,365.28		9,365.28		NO.
21	2C	POINIER ST. TO LAFAYETTE ST., NEWARK (WID.)	ESSEX		0.947		0.947	76,188.13		76,188.13		76,188.13		NO.
25	2D-3D	COOPER RIVER TO KAIGHN AVENUE CIRCLE, CAMDEN	CAMDEN	2.111			2.111	392,246.87	273,766.60	666,013.47		43,987.40	622,026.07	SO.
25	4D-5D-6C-7D-8H	PARTIAL REPAVING NEW BRUNSWICK TO ELIZABETH	MID. & UNION					264,039.46		264,039.46		213,802.00	50,237.46	NO.
25CL		PARTIAL PAVEMENT REPLACEMENT (PULASKI SKYWAY)	HUDSON						76,005.50	76,005.50		76,005.50		BR.
25-A		PASSAIC RIVER BRIDGE (SUBSTRUCTURE)	ESS. & HUD.						410,269.12	410,269.12		361,036.83	49,232.29	BR.
27	17	NASSAU STREET, PRINCETON (RESURFACING)	MERCER		1.086		1.086	77,415.23		77,415.23		77,415.23		SO.
28	24B	VAN SYCKLES CORNER TO WHITE HOUSE	HUNTERDON	2.766			2.766	455,507.60	73,235.25	528,742.85		6,608.08	522,134.77	SO.
28	25C	WHITE HOUSE TO NORTH BRANCH	HUN. & SOM.	2.004			2.004	240,052.15		240,052.15			240,052.15	SO.
35	34C	MATAWAN CREEK BRIDGE APPROACHES	MONMOUTE		0.437		0.437	44,527.10		44,527.10		44,527.10		SO.
35	38B	N. Y. & L. B. OVERPASS, MORGAN	MIDDLESEX	0.120			0.120	40,694.73	52,035.90	92,730.63			92,730.63	SO.
		BRIGANTINE BRIDGE	ATLANTIC	0.141			0.141		190,069.85	190,069.85		53,219.56	136,850.29	BR.
		ACCESS ROADS TO MILITARY ESTABLISHMENTS (100% FEDERAL MONEY)												
DA-NR	14	ASBURY AVENUE TO EARLE NAVAL DEPOT	MONMOUTH		0.708		0.708	13,022.50		13,022.50		13,022.50		SO.
DA-WR	20	MAXWELL ROAD, EATONTOWN	"		0.298		0.298	4,395.37		4,395.37		4,395.37		SO.
DA-WI	21	INDUSTRIAL SURPLUS STORAGE DEPOT, LINDEN & RAHWAY	UNION		0.681		0.681	20,184.62		20,184.62		20,184.62		NO.
		STATE HIGHWAY CONTRACTS COMPLETED IN 1945			2.470		2.470	$ 208,235.74	$ 76,005.50	$ 284,241.24		$ 284,241.24		
		STATE HIGHWAY CONTRACTS CARRIED INTO 1946		7.142	0.977		8.119	$1,535,503.24	$ 999,376.72	$2,534,879.96		$ 681,703.87	$1,853,176.09	
		ACCESS ROAD PROJECTS COMPLETED IN 1945			1.687		1.687	$ 37,602.49		$ 37,602.49		$ 37,602.49		
		TOTALS		7.142	5.134		12.276	$1,781,341.47	$1,075,382.22	$2,856,723.69		$1,003,547.60	$1,853,176.09	

* WORK SUSPENDED 5/31/43 UNTIL SUCH TIME AS CONTRACTOR CAN OBTAIN MATERIALS TO COMPLETE SUPERSTRUCTURE.

1945
Annual Report
Northern District.

Mr. C. F. Bedwell,
Acting State Highway Engineer,
Trenton, N. J.

Dear Sir:--

I am submitting herewith the Annual Report of the Northern Construction District for the year 1945.

Yours very truly,

C A Burn

C. A. Burn,
District Engineer.

MMD

ANNUAL REPORT

YEAR 1945.

STATE HIGHWAY DEPARTMENT

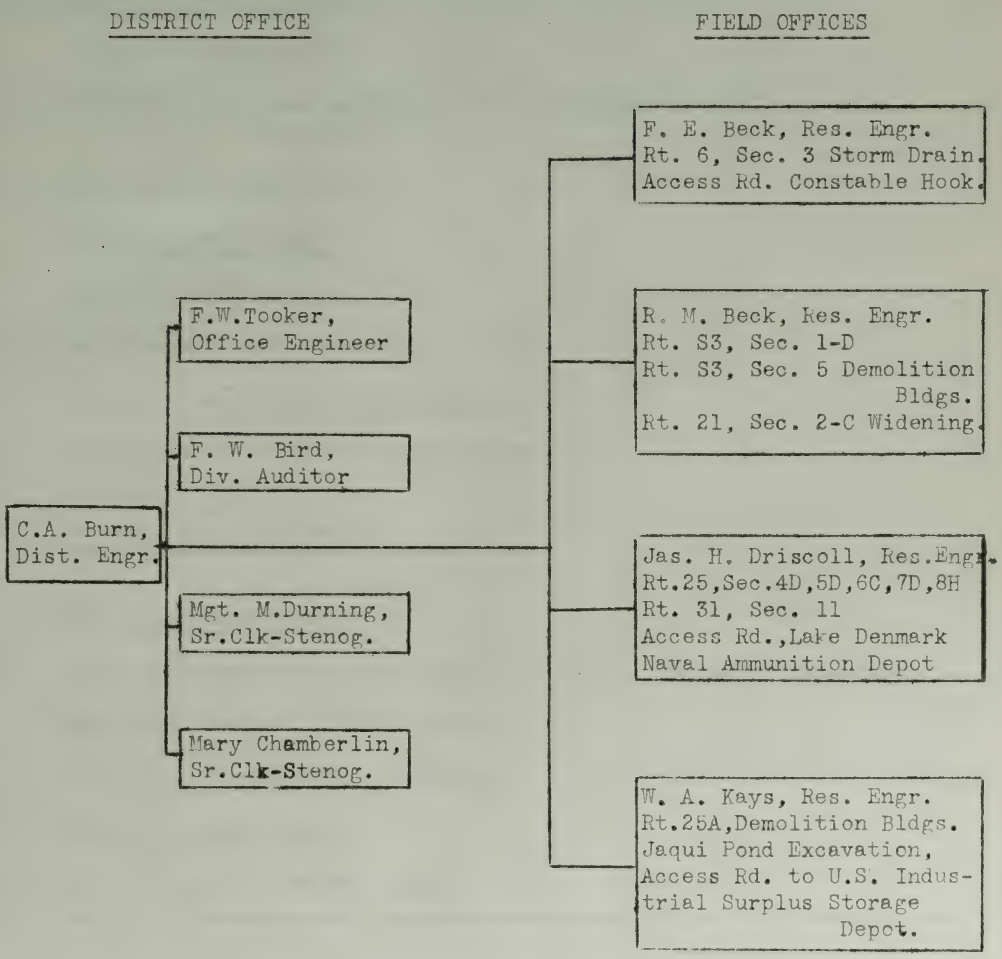
NORTHERN DISTRICT

C. A. Burn, District Engineer.

* ORGANIZATION CHART *

NORTHERN CONSTRUCTION DIVISION

FOR 1945.


DISTRICT OFFICE
FIELD OFFICES
C.A. Burn, Dist. Engr.
F.W.Tooker, Office Engineer
F. W. Bird, Div. Auditor
Mgt. M.Durning, Sr.Clk-Stenog.
Mary Chamberlin, Sr.Clk-Stenog.
F. E. Beck, Res. Engr. Rt. 6, Sec. 3 Storm Drain. Access Rd. Constable Hook.
R. M. Beck, Res. Engr. Rt. S3, Sec. 1-D Rt. S3, Sec. 5 Demolition Bldgs. Rt. 21, Sec. 2-C Widening.
Jas. H. Driscoll, Res.Engr. Rt.25,Sec.4D,5D,6C,7D,8H Rt. 31, Sec. 11 Access Rd.,Lake Denmark Naval Ammunition Depot
W. A. Kays, Res. Engr. Rt.25A,Demolition Bldgs. Jaqui Pond Excavation, Access Rd. to U.S. Industrial Surplus Storage Depot.

CONSTRUCTION PROJECTS COMPLETED IN 1945.

Contracts let in 1944.

State Highway Projects.

Route S3, Section 1-D.

Route #25, A, Clearing Right of Way by Demolition of Buildings.

Route #31, Section 11.

Federal Access Roads.

Constable Hook.

Lake Denmark Naval Ammunition Depot.

Construction for State Institutions.

Excavation of Jaqui Pond, Greystone Park.

Contracts let in 1945.

State Highway Projects.

Route S3, Section 5, Clearing Right of Way, Demolition Buildings.

Route #6, Section 3, Storm Drains.

Route #21, Section 2-C, Widening.

Federal Access Roads.

U.S. Industrial Storage Depot.

CONTRACTS UNCOMPLETED IN 1945 CARRIED INTO 1946.

State Highway Project.	Percent Completed
Route 25 Sections 4D, 5D,6C,7D & 8H, Repair of pavement	80.97%

NORTHERN CONSTRUCTION DISTRICT - PROJECTS COMPLETED IN 1945.

LENGTH & TYPE OF PAVEMENT

Route	Section	Local Name	County	Reinf. Conc.	Plain Conc.	Bit.Conc. on Macadam	Total	Revised Contract Amount	Amount Completed in 1944	Amount Completed in 1945
	Construction started in 1944									
	State Highway Projects									
S-3	1-D	Rt. 3 to Rt. 2	Bergen	1.024	0.169		1.193	173,374.65	70,000.00	103,374.65
25 A		Demolition Buildings	Hudson					19,963.00	8,384.46	11,578.54
31	11	Through Andover	Sussex			1.098	1.098	* 86,530.54	71,983.65	14,546.89
				1.024	0.169	1.098	2.291	279,868.19	150,368.11	129,500.08
	Federal Access Roads									
	Constable Hook		Hudson	Pen.Mac. 1.229		0.052	1.281	58,803.42	25,019.50	33,783.92
	Lake Denmark Naval Supply Depot		Morris	0.359			0.359	18,163.60	2,007.00	16,156.60
				1.588		0.052	1.640	76,967.02	27,026.50	49,940.52
	Institutional Project									
	Excavation of Jaqui Pond Greystone Park		Morris					16,682.55	14,812.35	1,870.20

* No Bridge Engineer assigned to this project, work supervised by Road Resident Engineer.

NORTHERN CONSTRUCTION DISTRICT CONTRACTS LET IN 1945 & COMPLETED

LENGTH & TYPE OF PAVEMENT

Route	Section	Local Name	County	Reinf. Conc.	Plain Conc.	Bit.Conc. on Rein.Conc.	Total	Revised Contract Amount	Amount Completed in 1945	Amount to be Completed in 1946.
	State Highway Projects									
S-3	5	Clearing Right of Way	Bergen					740.00	740.00	
6	3	Storm Drain	Bergen					9,365.28	9,365.28	
21	2 C	Poinier - Lafayette Sts. Widening	Essex			0.947	0.947	76,188.13	76,188.13	
								86,293.41	86,293.41	
		Construction Project Uncompleted in 1945								
25	4D,5D,6C, 7D, & 8H Repairs		Middlesex & Union	18.3			18.3	264,039.46	213,802.00	50,237.46

SUMMARY OF CONSTRUCTION WORK PERFORMED IN THE NORTHERN CONSTRUCTION DISTRICT IN 1945.

	Reinf. Conc.	Plain Concrete	Bit. Conc. on Macadam	Total	Contract value of Work completed in 1945
Contract work started in 1944, completed in 1945					
State Highway Projects	1.024	0.169	1.098	2.291	129,500.08
Federal Access Roads, Penetration Macadam		1.588	0.052	1.640	49,940.52
Institutional Projects					1,870.20
Contracts started & Completed in 1945					
			Bit.Conc. on R.C.Conc.		
State Highway Projects			0.947	0.947	86,293.41
Contract let in 1945 carried into 1946					
State Highway work repairs	16.3			16.3	213,802.00
				21.178	481,406.21

Route S3, Sec. 1-D, Rutherford & East Rutherford.

Route 2 to Route 3, Bergen County.

Federal Aid Project. S N-FAP - 186 A (1).

General Contractors:	Standard Bitulithic Company.
Bonding Company:	Massachusetts Bonding & Ins.
Resident Engineer:	R. M. Beck.

Length of Project:	0.957 miles or 5051.28 feet.

Length, Width, Type and Depth of Pavement:

10" R. C. Pavement

367 lin.ft.	38' wide
1496 lin.ft.	24' to 38' wide
1126 lin.ft.	27' to 37' wide
1191 lin.ft.	26' wide
250 lin.ft.	20' wide
825 lin.ft.	0 to 20' wide
5255 lin.ft.	

10" Plain Concrete Pavement

891 lin.ft. (Northeast Ramp)	20' wide

18" R.C.Bridge Approach Slab

150 lin.ft.	38' wide
Subgrade:	Selected gravel.
Right of Way:	70 to 120' wide.

Plans & Specifications approved by S.H.C.	Aug. 16, 1944.
Date contract awarded:	Aug. 31, 1944.
Date contract executed:	Sept. 8, 1944.
Contract date for starting:	Oct. 9, 1944.
Date actually started:	Sept. 11,1944.
Work completed:	Aug. 17, 1945.
Contract time for completion:	70 Working days.
Extensions granted:	6 Working days.
Adjusted time for completion:	76 Working days.
Total working days used:	70 Working days.
Accepted by State Highway Commissioner:	Sept. 12, 1945.

Total amount of Original Contract:	$213,584.21
Less Bridge:	41,542.66
Amount of original Contract Road:	172,041.55
Amount of Extras:	8,103.40
Amount of Reductions:	6,770.30
Adjusted Amount Road Contract: Final:	173,374.65
Amount of Bridge Work done to date:	41,542.66

This project consists of paving the east and west approaches to Berry's Creek Viaduct on embankments placed under previous contracts, the construction of a bridge at the Junction of Route S 3 and Route 3 overpassing westbound traffic and the construction of concrete paved approaches to this bridge carrying southbound traffic over the westbound traffic lanes together with incidental widening of pavement, and the construction of island areas and drainage.

This project is typical of any concrete pavement construction with the exception of 4" recessed concrete joint sills at transverse joints, and the construction of cypress heart wood joint fillers.

Under all pavement and islands, there was placed a specially prepared sub-base material.

Route S-3, Section 5, Demolition of Buildings.

Northwest corner of Rutherford Ave. and Ridge Road,

Rutherford Bergen County.

General Contractors:	Cosman Wrecking Co.
Bonding Company:	Metropolitan Casualty Co.
Resident Engineer:	R. M. Beck.
Plans & Specifications approved by S.H.C.	May 9, 1945.
Date Contract awarded:	June 8, 1945.
Date Contract executed:	June 15, 1945.
Contract date for starting:	August 17, 1945.
Date actually started:	June 19, 1945.
Work completed:	Sept. 4, 1945.
Contract time for completion:	30 Working days.
Total working days used:	10 1/2
Accepted by the State Highway Commissioner:	Sept. 12, 1945.
Total amount of original contract:	$ 740.00
Adjusted contract amount: Final:	740.00

This project consists of the demolition of two Brick store buildings on Proposed Route S-3, Sec. 5, to clear the site for future highway construction.

Some of the proposals received on May 21st, 1945 for the removal of these buildings were irregular, so all formal bids were rejected. On permission from the State House Commission an agreement was made with the above contractor on the basis of his lowest bid which was less than $1,000.

Route #6, Section 3, Oakdene Ave. Storm Drain

Leonia and Fort Lee Non Federal Aid

Bergen County

General Contractor:	J. P. Burns
Bonding Company:	Seaboard Surety Co.
Resident Engineer:	F. E. Beck.
Length of Project:	1355 feet.
30" R.C. Pipe	40 "
24" R.C. Pipe	464 "
18" R.C.Pipe	918 "
Inlets and manholes	8
Plans and specifications approved by S.H.C.	May 23, 1945.
Contract awarded:	June 20, 1945.
Contract executed:	June 25, 1945.
Contract date for starting work:	July 10, 1945.
Date actually started:	July 26, 1945.
Contract date for completion:	30 working days.
Working days used:	30 " "
Contract completed:	October 18, 1945.
Accepted by S. H. C.	October 24, 1945.
Amount of original contract:	$ 10,756.00
Extra and Supplemental work:	90.60
Reductions:	1,481.32
Revised Contract amount: Final:	9,365.28

Storm water from Route 6 was causing serious errosion in property adjacent to the Highway. Consequently a storm drain was designed to run along a paper street (Oakdene Ave.) and along an acquired easement to pick up the water and connect it with a storm drainage system of the Town of Leonia. This connection was made at the foot of the hill some distance from the highway.

One section of storm drain is laid on a grade of 27% ±.

The erroded area was regraded to approximately original surface and berms were constructed to throw water originating along line of drain into the several basins and inlet pipes provided for that purpose.

Route #21, Section 2-C, Poinier to Lafayette St.,

Newark, Essex County.

General Contractors:	Standard Bitulithic Co.
Bonding Company:	U. S.Fidelity & Guaranty Co.
Resident Engineer:	R. M. Beck.
Length of Project:	0.95 miles or 5014.08 '
Length,Width,Type and Depth of Pavement:	
8" R.C.Base Course plus 3" of CA-BC 2	
870 lin.ft.	23.405' wide
4134 lin.ft.	18.905' wide
Subgrade:	Fine sand
Plans & Specifications approved by S.H.C.	June 20, 1945.
Date contract awarded:	June 28, 1945.
Date contract executed:	June 29, 1945.
Contract date for starting:	July 10, 1945.
Date actually started:	July 12, 1945.
Work completed:	Nov. 3, 1945.
Contract time for completion:	50 working days.
Total working days used.	46½ Working days.
Accepted by State Highway Commissioner:	Nov. 20, 1945.
Total amount of original contract:	$76,972.33
Amount of extras:	650.28
Amount of Reductions:	1,434.48
Adjusted contract Amount: Final	76,188.13

This project extended between Poinier Street and Lafayette Street and in general consisted of widening the present McCarter Highway approximately 19 feet or to the Pennsylvania Railroad elevation wall, providing a width of approximately 58 feet, together with incidental work consisting of drainage, curb, and widening of the entrance to the Southbound Ramp to viaduct connection to Routes 25 and 29.

Route #25, Sec. 4D,5D,6C,7D & 8H, Partial Repaving,
From Route S-26 to Port Reading Railroad and from Woodbridge
Cloverleaf to City Line of Elizabeth.

Non Federal Aid. Middlesex and Union Counties.

General Contractors:	Nesto Contracting Co.
Bonding Company:	Standard Accident Ins.Co.
Resident Engineer:	James H. Driscoll.

Length of Project:	96624 lin.ft.-18.3 miles

Pavement: Length, Type, Depth:	
9" R.C.Pavement Surface:	96574 lin.ft.
18" R.C.Pavement, Bridge Approach Slabs:	50 " "
2" Pavement Type "A" or "T".	410 " "
Widths paved:	Variable.
" graded:	"
Shoulders:	Stone shoulders 7" thick-6'-1" in width Section 4D. 5'-0" in width Sections 5D & 6C. Small quantity in driveways.
Subgrade:	Bank run sand & gravel. 4" layer of subbase material under interior slabs except as noted on plans. 4" to 8" and 6" to 12" layer of subbase material under outside slabs dependent upon location. $5\frac{1}{2}$" to 10" and $9\frac{1}{2}$" to 14" layer of subbase material under shoulders dependent upon location.
Runoff Material:	0 to $4\frac{1}{2}$" Runoff material under shoulder subbase Sections 4D,5D & 6C.
Curbs:	3313 lin.ft. of White Conc.Vert.Curb 650 " " " " " Sloping " 1120 " " " Reset Conc.Sloping" 5083 " " Total.

Plans and Specifications approved by S.H.C.	May 23, 1945.
Date Contract Awarded:	June 20, 1945.
Date Contract Executed:	June 25, 1945.
Contract date for starting work:	July 9, 1945.
Date work actually started:	July 23, 1945.
Contract Time for completion:	80 Working days.
Extensions Granted:	10 " "
Adjusted time for completion:	90 " "
Working days used to December 31, 1945:	$75\frac{1}{2}$ " "
Percentage completed " " "	81%

Amount of original contract:	248,873.32
Amount of Reductions:	4,436.86
Amount of Extra & Supplemental Work:	19,603.00
Adjusted Contract Amount to date:	264,039.46
Amount completed to date:	213,802.00
Amount to be completed:	50,237.46

This project consists of the removal and replacing of the badly cracked and broken slabs on Route 25 caused by the heavy war time truck travel from the Route S-26 Circle in North Brunswick Township to the Port Reading Railroad in Woodbridge Township and from the Cloverleaf at Woodbridge to the City Line of Elizabeth. The replacing and resetting of curbs, White Concrete and Corrugated Concrete Island Pavements, Concrete Sills Ledges and Junctures, Topsoiling and the Construction of Shoulders on Sections 4D,5D,6C on the Northbound side of Route 25.

Due to the extremely heavy traffic,paving on this project was between the hours of 9 A. M. and 4 P.M. The side under reconstruction was closed to traffic during these hours and two-way traffic was maintained on the side of the road upon which work was not in progress. Between the hours of 4 P.M. and 9 A. M. normal one-way traffic was maintained on the side of the road which was being constructed.

To expedite the opening of replaced concrete for traffic, it was specified that Hi-early cement be used throughout the project.

Diversion of traffic from one side of the road to the other during construction was made through the existing island openings under supervision of traffic directors. At various locations throughout the project bombs, barricades and directional signs were used to facilitate the flow of traffic.

Winter weather forced the suspension of paving operations and it is expected that the contractor will resume operations when the weather is suitable for paving, topsoiling, curbing and other incidentals pertinent to the completion of the contract.

Route #25 A, Demolition of N. J. Adamant Mfg. Co. Buildings

East Newark, Hudson County.

Passaic River Bridge Approach.

General Contractors:	Geo. Cosman Wrecking Co.
Bonding Company:	Metropolitan Casualty & Ins Co.
Resident Engineer:	W. A. Kays.

Plans & Specifications approved by State Highway Comm.	Sept. 27, 1944.
Date Contract Awarded:	October 9, 1944.
Date contract executed:	November 17, 1944.
Contract date for starting work:	December 15, 1944.
Date actually started:	October 18, 1944.
Contract time for completion:	90 working days.
Total working days used:	75 working days.
Date of completion:	May 18, 1945.
Accepted by State Highway Commissioner:	May 23, 1945.

Total Amount of Contract:	$ 19,963.00

This project which consisted of clearing the right of way for Route 25A was started in the Fall of 1944 and described in that year's report, at which time it was 42% completed.

The remaining portion, completed this year, consisted mostly of reinforced concrete walls, pillars, floors, foundations and a superstructure of steel frame construction.

A crane rigged with a ball weight was used to break up the reinforced concrete portion as well as toppling over the brick walls and stacks.

As these buildings were located close to the river wall great care had to be exercised to prevent the debris from falling into the water.

A large quantity of sand that had been left in the buildings was used as a top dressing over the cleared building area so that the site presented a very neat appearance when completed.

Route #31, Section 11, Through Andover,

Sussex County.

General Contractors:	N.J. State Highway Dept. (Maintenance Div.)
Resident Engineer:	J. H. Driscoll.

Length of Project: 11600 lin.ft.-2.2 miles

Length, Type & Depth of Pavement:

58+0 to 116+0 (1" Type A) 4" Pen.Mac.Foundation (Hot application)
1 course Plain Macadam 4" thick.

Width: Pavement 20' Shoulders 10' on each side.

Width of Right of Way: 66 feet.

State Highway Commissioner directed work to be done by the Maintenance Division	June 1, 1944.
Date work started:	July 17,1944.
Date work completed:	Aug. 1, 1945.

Total Amount of Contract:	$ 83,258.60.
Total Amount of Bridge:	4,368.00.
Total Amount of Road:	78,890.60.
Amount of Extra & Supplemental Work:	10,695.54.
Amount of Reductions:	7,423.60.
Adjusted Contract Amount, Road & Bridge: Final.	86,530.54.

A complete description of this project was given in the Annual Report for 1944. Late in March of 1945 Maintenance Division forces started work on topsoiling, fertilizing and seeding and dressing up the shoulders. The work was finally completed as of August 1, 1945.

Access Road to Lake Denmark Naval Ammunition Depot,

Denmark-Marcella Road.

Rockaway Township, Morris County,

Federal Project DA-NR 13.

General Contractor:	Franklin Contracting Co.
Bonding Company:	Standard Accident Ins.Co.
Resident Engineer:	James H. Driscoll.

Length of Project:	2905 lin.ft.-0.550 mi.
Length of Fed.Aid Project: DA-NR 13:	2905 lin.ft.-0.550 mi.

Pavement: Length, Type, Depth:	
Penetration Macadam Surface Course, Hot Application 3" thick:	1895 lin.ft.
Macadam Base Course 4" thick:	1895 lin.ft.
Surface Treatment:	1010 lin.ft.

Pavement Width:	20 feet.
Graded Width:	30 feet.

Plans & Specifications approved by S.H.C.	September 28, 1944.
Date contract Awarded:	November 1, 1944.
Date contract executed:	November 13, 1944.
Contract date for starting work:	November 28, 1944.
Date work actually started:	November 17, 1944.
Contract time for completion:	December 31, 1944.
Extensions granted:	20 working days from April 2, 1945.
Working days used:	20 Working days.
Work completed:	June 8, 1945.
Accepted by State Highway Commissioner:	July 18, 1945.

Original contract Amount:	$ 20,142.30
Reductions:	2,445.70
Extras & Supplementals:	467.00
Adjusted Contract Amount, Final:	18,163.60

A description of this project was given in the Annual Report for 1944. In the Spring when the contractor resumed operations the work consisted of excavating and grading, blasting and removing rock, building drainage structures, placing macadam base course, penetration macadam surface and surface treatment.

Special care was exercised during blasting operations due to the close proximity of the Lake Denmark and Picatinny Arsenal Government Reservations.

The work was finally completed on June 8, 1945.

Constable Hook Access Road, City of Bayonne,

Hudson County, F. A. Proj. DA-WI 19.

General Contractors:	Franklin Contracting Co.
Bonding Company:	Standard Accident Ins. Co.
Sub-contractor: Pile Trestle, Culvert:	H. L. Harrison & Son Inc.
Resident Engineer:	F. E. Beck.

Length of Project:	6765' or 1.281 miles.
Federal Funds for full length.	
Penetration Macadam 30' width:	1621' - .307 miles.
Penetration Macadam 24' "	4870' - .922 "
Cinder Shoulders: 6' "	4870' - .922 "
Pavement Type "A" R.R. Xing:	274' - .052 "
Total Length:	6765' -1.281 "

Plans & Specifications approved by S.H.C.	Sept. 27, 1944.
Contract awarded:	Oct. 16, 1944.
Contract executed:	Oct. 26, 1944.
Contract date for starting work:	Nov. 20, 1944.
Date actually started:	Oct. 30, 1944.
Contract date for completion:	Dec. 31, 1944.
Extensions granted:	20 working days after Dec.31, 1944. 15 working days from Apr. 3, 1945.
Time used:	13 working days
Work completed:	July 3, 1945.
Accepted by State Highway Commissioner:	August 1, 1945.

Amount of original contract:	$ 47,620.80
Extra and Supplemental work:	12,322.62
Reductions:	1,140. 00
Revised Contract amount:	58,803.42

This project was fully described in last year's report.

In the Spring operations were resumed and it was found that the macadam foundation had stood up satisfactorily over the winter even though the road had been under traffic in some sections.

Access Road to U. S. Industrial Surplus Storage Depot,

Linden and Rahway Federal Proj. DA-WI 21

Union County.

General Contractor:	DelBalso Const. Corp.
Bonding Company:	Maryland Casualty Co.
Resident Engineer:	W. A. Kays.

Length of Project:	0.681 miles.
Length, Type & Depth of pavement:	
421 lin.ft. Reconditioned Pen. Mac. Base	28' wide.
3065 lin.ft. Mod. Pen. Mac. 3" thick	22' wide.
3486 lin.ft. Surface Type A 1" thick	28' & 22' wide.

Plans & Specifications approved by State Highway Comm:	May 9, 1945.
Date Contract Awarded:	June 4, 1945.
Date Contract Executed:	June 7, 1945.
Contract date for starting work:	June 25, 1945.
Date work actually started:	June 12, 1945.
Date of completion:	August 2, 1945.
Contract time for completion:	30 Working Days.
Extension granted:	9 Working days.
Time used:	25½ Working days.
Accepted by State Highway Commissioner:	August 22, 1945.

Total amount of Original Contract:	$18,410.20
Amount of Extra and Supplemental Work:	3,610.52
Amount of Reductions:	1,836.10
Adjusted Contract Amount, Final:	20,184.62

This project, located in Rahway and Linden provides access to this Surplus Storage Depot from Route 25 on the north and from Barnett Street on the south.

The construction consisted of improving East Grand Ave. from Route 25 to Barnett Street and Barnett Street from E. Grand Ave. to the south entrance of Depot at Avenue C with a Type A Surface, 1" thick on a modified Penetration Macadam base and the construction of an entrance on Route 25 at the north end of Avenue C with a similar surface and included a crossover in the center island on Route 25 for use by Southbound traffic.

Plans called for the patching of existing bituminous macadam pavement on E. Grand Avenue with Type A bottom course material and surfacing with Type A pavement, 2" thick.

Traffic had raveled the existing pavement on East Grand Ave. to such an extent that it was found advisable to scarify the entire surface, add 1½" stone, reshape and penetrate with O-A 4, thus providing a uniform foundation comparable to that specified for Barnett Street. Consequently the 2" Type A surface specified for this area was reduced to a 1" thickness.

After construction was started investigation showed that the stone curb and gutter slabs on Barnett Street were collapsed between Sta. 9+70 and 17+30 on the right and displaced at various places on the left side of the street. It was necessary to reset this curb and gutter in order to provide proper drainage.

This construction gives easy access to both sides of this Surplus Storage Depot.

Excavation of Jaqui Pond at Greystone Park, Morris Plains, Morris County for Department of Institutions & Agencies,

General Contractor:	A. S. Wikstrom.
Bonding Company:	Maryland Casualty Co.
Resident Engineer:	W. A. Kays.
Plans & Specifications approved by S.H.C.	October 22, 1943.
Date contract awarded:	January 24, 1944.
Date contract executed:	April 15, 1944.
Date actually started:	June 6, 1944.
Specified date of completion:	June 30, 1944.
Extensions granted:	From July 1,1944 30 working days.
Time used:	30 working days.
Date completion:	October 5, 1945.
Accepted by State Highway Commissioner:	October 24, 1945.
Total amount of contract:	$ 10,518.00
Amount of Extra work:	6,498.45
Amount of reductions:	333.90
Adjusted contract amount, final:	16,682.55

The major portion of this project was completed in 1944 and detailed information given in the Annual Report of that year.

The work remaining to be done this year consisted of the levelling off of the spoil banks which were too wet, in the Fall of 1944, to permit any equipment to operate on them.

In May of this year a crane and bulldozer were used in an attempt to complete the grading of these spoil banks. After the removal of the top crust from a portion of these areas the silt underneath was found to be too wet to use any equipment on, so it was allowed to stand until the first of September. At that time a bulldozer was put on the fills and by skillful operation the contractor succeeded in spreading out the silt over the areas designated on plans and grading it so that it would drain properly.

Yearly Report - 1945
Southern Construction
District

HDR:MM

December 31, 1945

Mr. C. F. Bedwell
Construction Engineer
Trenton, New Jersey

Dear Sir:

There is submitted herewith the yearly report of the Southern Construction District for 1945.

During the winter of 1943 - 1944 it was noted that the use of Calcium Chloride ($CaCl_2$) for the de-icing of some of our newer concrete surface pavements was having a deleterious effect. Consequently a rather comprehensive survey was made of concrete pavements constructed in this District during the years 1942 & 1943, covering a total of 19.12 miles and representing 489,979 square yards of pavement.

Individual projects ranged from 0.23% to 4.56% of pavement surface showing the effect of the use of this material, the depth of the scaling varying from 1-64" to ½" depending on the location and frequency of application.

Our observations correspond closely to those given in numerous articles in the technical publications on this subject. Further observations are being made to determine, if possible, if scaling is progressive.

Much publicity has recently been given to the use of Air Entraining Cement in the construction of concrete surface pavements as proof against the damaging effect of repeated Calcium Chloride applications. With this in mind, the Department inaugurated an experiment in this direction by using Air Entraining Cement in the concrete pavement on portions of Route 24, Section 22 & Route 24N, Section 1 Phillipsburg. The Air Entraining Cement being used at such locations where grades and traffic conditions would probably make applications of Calcium Chloride most frequent during icy weather. The results will be watched with interest.

Respectfully submitted,

H. D. Robbins

H. D. Robbins
District Engineer

Route 4N (1917) Section 10B
Norwood Avenue, from Roseld Ave. to Roosevelt Avenue
State Project

Boro of Deal	Monmouth County
General Contractor:	Weldon Contracting Co.
Bonding Company:	Seaboard Surety Co.
Resident Engineer:	J. E. Dederick
Length of project:	.977 mile
Pavement:	9" RC 36' wide on easterly lane
Graded:	Dual 36' roadways with 18'± center island
Right of Way:	100+

Bids received: 10-10-45	Contract awarded: 10-10-45
Date of contract: 10-15-45	Contract in effect: 10-25-45
Date work started: 11-26-45	Completion time: 6-15-46

Amount of original contract:	$ 142,962.43
Amount of adjusted contract to 12-31-45:	142,962.43
Amount completed to 12-31-45:	3,050.00

Route 4N, Section 10B is that portion of Norwood Avenue, approximately one mile in length, in the Borough of Deal with two 36' width roadways and medial center island, 18' in width. Both roadways at present are travelled in both directions, the westerly one being 3" asphalt pavement on 6" concrete base, 20' in width with 8' bituminous treated shoulders, maintained by the State as Route 4N, and the easterly one a penetrated gravel 36' in width and known as Norwood Drive, considered a local street. This contract will provide for a 9" reinforced concrete pavement for the full 36' width of the easterly road. Also it will cut through the existing center island and pave all street intersections to provide a true dual width highway of Route 4N, within the old limits, for one way northbound and one way southbound traffic.

It is desired, due to anticipated difficulty with underground utility structures, that the involved work of pipe placing be completed during the winter months. Drainage construction is one-third complete as of Jan. 1, 1946 with the inlet and manhole structures approximately one-fifth completed.

With some revisions to avoid utility lines, all drainage work of pipe and structures is expected to be completed during January and February and the pavement of the easterly roadway excavated and graded for an early paving start on April 1, 1946.

Route 24 Section 22
Route 24N Section 1
Fifth Street to Phillipsburg Toll Bridge Plaza
Fed. Project # SN-FAP-32A(4)
SN-FAP-32E(1)

Lopatcong Township & Town of Phillipsburg — Warren County

General Contractor: Fred Berlanti & Son, Inc.
Bonding Company: Hartford Accident & Indemnity Co
Resident Engineer: L. T. McCormick - M. H. Boss

Length of project: 1.593 miles
Pavement: - Dual pavement with curbs on both sides thruout 32' to 40' wide with center island 6' to 230' wide. Existing 8" RC widened with 8" conc. base topped with Type A used for widening and 10" RC roadways constructed.
Graded: Dual roadways 32' to 40' wide with variable center island 6' to 230'
Right of Way: 120' and variable

Bids Received: 9-18-44 — Contract awarded: 9-21-44
Date of contract: 9-28-44 — Contract in effect: 10-24-44
Working days started: 11-3-44 — Date work started: 10-9-44
Completion time: 140 Working days — Extensions to Dec.31,1945: 3 W.D.
Time used to Dec. 31, 1945: 102 working days

Amount of original contract: $ 629,250.00 (Road)
Amount of adjusted contract to 12-31-45: 642,782.71
Amount completed to 12-31-45: 537,645.81
Amount completed in 1945: $ 431,745.81

Bridges included in this contract cost:

App. span widening to Ingersoll-Rand	$ 16,044.23
Underpass at W.B.Ramp, 54' span Encased I Beams	53,767.27

This section begins at Fifth Street Lopatcong Twp. at a point east of Phillipsburg where Route 28 Connection from Still Valley intersects Route 24. It then extends westerly to Phillipsburg along Route 24 to make connections to the Toll bridge over the Delaware River to Easton and to the old bridge to the south as well as to local streets of Phillipsburg.

The purpose of this construction is to widen the existing inadequate 20' concrete pavement to a dual roadway that will facilitate heavy truck & passenger traffic movements to and from Easton and Phillipsburg and Routes 24 and 28.

The Contractor started operations on 10-9-44. He worked on excavation, and drainage during the Winter of 1944-1945. The concrete pavement operations started 6-22-45 and were completed 12-8-45.

The work was retarded considerable by the rains all Summer and especially by the cloud burst and flood of July 9,1945, which did heavy damage, undermining the new concrete pavement on west bound from Sta. 200+00 to Sta. 217+40, the subgrade material being washed out from 1' to 12' in depth. These slabs were shored up and backfilling was immediately started, using subbase material which was thoroughly tamped under the slabs. A recent check on the grades of these slabs show the largest difference from original grade to be only one quarter of an inch after traffic having used this pavement for several months before the last check was taken.

The contract is now 87% complete, curb, sidewalk and black top intersections, topsoiling and other incidentals remaining to be completed in the Spring of 1946.

Route 24, Section 22
Route 24N, Section 1

Route 27, Section 17
Nassau Street Resurfacing-Princeton
State Project

Boro of Princeton
Mercer County

General Contractor: Union Paving Company
Bonding Company: Standard Accident Insurance Co.
Resident Engineer: D. H. Johnston

Length of Project: 1.086 miles
Pavement: Removing existing asphalt block and resurfacing the existing concrete base with FABC-2 3" thick.
Graded: 46-60' between curbs
Right of Way: 100'

Bids Received: 6-11-45
Contract Awarded: 6-20-45
Date of contract: 6-25-45
Contract in effect: 6-28-45
Working days started: 7-9-45
Date work started: 8-7-45

Completion time: 50 W. days
Total: 50 Working days
Contract Completed: 11-8-45
Working days used: 49
Work accepted by Commissioner: 11-20-45

Amount of original contract:	$ 78,914.50
Extra Work:	6,543.93
Reductions:	8,043.20
Final Cost:	77,415.23

This project consisted of the removal of a paved surface of asphalt block and sand cement cushion constructed in 1915 and 1916, the widening to a minimum 46 foot curb to curb width in one square of the business area between Washington Road and Charlton St. and the resurfacing of the street with a 3" thick bituminous concrete surface.

Prior to the resurfacing, the Bell Telephone Company constructed 3000 feet of underground conduit and the Princeton Water Company installed 100 new service connections. The utility installations together with the maintenance of traffic on one half the traveled way and at the same time providing sufficient parking area, proved to be major obstacles in carrying this work forward to the complete satisfaction of the public. Concrete gutters were constructed throughout and some additional drainage structures were installed to the betterment of the drainage in general.

Route 28, Section 24B
Van Syckles Corner - White House, Paving Southerly Half
State Project

Clinton & Readington Townships — Hunterdon County

General Contractor: Franklin Contracting Co.
Bonding Company: Standard Accident Insurance Co.
Resident Engineer: L. T. McCormick

Length of project: 2.766 miles
Pavement: 10" R. C. 24' single & 24' dual
Shoulders: 8" Av. depth stone 4' on island side & 9' outside.
Graded: 2 - 37' roadways, 48' & variable center island, 19' & variable sidewalk spaces.
Right of Way: 150' wide and variable.

Bids received: 10-10-45
Contract awarded: 10-10-45
Date of contract: 10-17-45
Contract in effect: 10-25-45
Working days started: 11-5-45
Date work started: 11-5-45 (bridge)
Completion time: 120 Working days
Extensions to Dec. 31, 1945: 0
Time used to Dec. 31, 1945: 12 working days

Amount of original contract: $ 455,507.60 Road

This contract is another link in the dualizing of Route 28 which is urgently needed to release traffic congestion.

Except for .4 of a mile this construction will consist of building another roadway for east bound traffic along existing concrete highway. Thru Potterstown, grade and alignment improvements will require the construction of both east and west bound roadways.

Due to the lateness of season and the difficulty in quickly assembling materials the only work being done so far is the extension of the bridges. It is expected road work will be started in March 1946 if ground conditions are favorable.

Route 28, Section 25C
WhiteHouse Relocation to North Branch Relocation
State Project

Readington & Branchburg Townships — Hunterdon & Somerset Counties

General Contractor: Franklin Contracting Co.
Bonding Company: Standard Accident Insurance Co.
Resident Engineer: L. T. McCormick

Length of project: 2.004 miles
Pavement: 10" R.C. 24' wide on Northerly side for West Bound Traffic.
Shoulders: 8" Av. thickness stone 4' wide on island & 9' on outside W.B. resurfaced 7 & 10' wide east bound
Graded: 37' for west bound and 40' for east bound with 60' and variable center island.
Right of Way: 160' and variable

Bids received: 10-10-45
Date of contract: 10-17-45
Working days started: 11-5-45
Completion time: 80 Working days
Contract awarded: 10-10-45
Contract in effect: 10-25-45
Date work started:
Extensions to Dec.31,1945: 0

Amount of original contract: $ 240,052.15

This contract will complete the dualizing between WhiteHouse and North Branch.

The paving will be on the northerlylane to provide for west bound traffic. The existing pavement will be used for east bound traffic.

Due to lateness of season and the difficulty of quick assembly of materials no work will be done until favorable ground conditions occur in the Spring of 1946.

Route 35, Section 34C
Matawan Creek Bridge Approaches
State Project

Matawan Township — Monmouth County

General Contractor: Nesto Constructing Co.
Bonding Company: Standard Accident Insurance Co.
Resident Engineer: J. E. Dederick

Length of Project: 0.437 miles
Pavement: 6" macadam base; 3" mod, pen, mac, intermediate course with 1" type"A" top - 40' wide.
Graded: 40' with 7 & 10' walk spaces.
Right of Way: 100'

Bids Received: 6-11-45
Contract Awarded: 6-20-45
Date of contract: 6-25-45
Contract in effect: 6-28-45
Working days started: 7-9-45
Date work started: 7-2-45

Completion time: 40 Working Days
Total: 40 Working Days
Contract Completed: 10-17-45
Working days used: 40 W. Days
Work accepted by Commissioner: 10-24-45

Amount of original contract:	$ 43,924.80
Extra Work:	711.20
Reductions:	108.90
Final cost:	$ 44,527.10

This project, a much needed improvement, consisted of widening, bringing up to grade and repaving the approach embankments at the Matawan Creek Bridge. These embankment approaches over meadow lands bordering Matawan Creek had settled through recent years resulting in irregular pavement and depressed grades of very poor riding conditions and bad drainage. The Bridge Division Maintenance forces raised the north approach span to the Bridge 14", the south approach span 21" and constructed concrete support pier-heads at the four corners.

Work on this project proved exceedingly difficult as two-way traffic was maintained throughout the entire peak of summer travel on half the roadway width at a time. Work progressed very well, though slowly, over the seven (7) successive stages of construction. On August 28, 1945 the 20' width pavement on the left half was completed. The second 20' width on the right was paved on September 8, 1945 and the work of 4" topsoiling and rebuilding of guard fence brought to a completion of all work on the job on October 17, 1945.

As a Finishing machine was used to spread the 1" wearing surface of Type A Pavement, Top material, a good riding job resulted and the entire work completed satisfactorily to greatly improve this portion of Route 35 over Matawan Creek meadows.

Route 35, Section 38B
Morgan N.Y. & L.B.RR. Br. & Approaches
State Project

Boro of Sayreville	Middlesex County
General Contractor:	Weldon Contracting Company
Bonding Company:	Seaboard Surety Company
Resident Engineer:	J. E. Dederick
Length of project:	.120 miles
Pavement:	9" R.C. on approaches to bridge 32' wide.
Graded:	30 & 32' north bound 32' south bound 24' and variable center island with 10' sidewalk spaces - 7' walks on bridge.
Right of Way:	Variable
Bids received: 9-26-45	Contract awarded: 9-26-45
Date of contract: 9-28-45	Contract in effect: 10-11-45
Working days start: - On delivery	of bridge steel
Completion time:	90 Working days
Amount of original contract:	$ 40,694.73 Road

The work of this contract consists of the construction of the superstructure of the steel and concrete through girder span for a highway bridge, 32 feet in width with one sidewalk, over the New York & Long Branch Railroad and of the construction of reinforced concrete approach pavements on the north and southbound roadways. Substructure of the bridge, including abutments and wing walls, and the approach embankments and subbase has been constructed under a previous contract.

Contract for this work was awarded at this early date to permit the placing of an order for the structural steel. Delivery and erection of this through girder steel is expected during February 1946, at which date of delivery working days for the project will be started. No work has been performed on this contract during 1945 and any work on the roadway approach pavements will be deferred until the Spring of 1946.

Route 56, Section 1
Beach Thorofare Bridge & Approaches
State Project

Atlantic City	Atlantic County
General Contractor:	Ole Hansen
Bonding Company:	Fidelity & Deposit Co. of Maryland
Resident Engineer:	E. M. Gillette

Length of Project:	.44 miles
Pavement:	2½" Bit. Conc. on 7" Mac. Base, Dual Pavements, 35' & variable with 4' center island across bridges.
Shoulders:	8" Gravel variable width
Graded:	70' and variable with 6' to 10' walk spaces.
Right of Way:	190'

Bids Received:	12-12-41	Contract awarded:	1-6-42
Date of Contract:	1-9-42	Contract in effect:	1-20-42
Working days started:	1-30-42	Date work started:	2-9-42

Completion time and extensions to 12-31-45: 250 Working days
Time used to 12-31-45: 200 Working days

Amount of Original Contract:	$ 131,527.99 (Road)
Amount completed to Dec.31,1943:	57,578.28
Amount completed during 1944-45:	0.00

This contract also provides for bridges over Beach thorofare and Venice Lagoon at a contract price of $ 1,035,485.80. The bridge over Beach Thorofare is 48% completed and Venice Lagoon 99% completed.

This contract provides for the construction of new bridge structures as mentioned above and widening the approaches of same. Temporary bridge structures and approaches were built and are still in use.

Due to the war conditions only the substructure of the Beach Thorofare Bridge was completed because of the steel shortage.

The road items of wet excavation, embankment, drainage items, etc. were completed as far as possible on May 31, 1943. The balance of these items and Beach Thorofare bridge superstructure will wait until the war is over. It is expected bridge steel will begin to arrive in February 1946 and that this contract can be completed ahead of the heavy summer traffic.

Asbury Avenue Access Road to Naval
Ammunition Depot at Earle
Fed. Aid Proj. # DA-NR-14

Atlantic & Shrewsbury Townships — Monmouth County

General Contractor: Fred McDowell
Bonding Company: U.S. Fidelity & Guaranty Co.
Resident Engineer: J. E. Dederick

Length of Project: .708 miles
Pavement: 1½" type A surface over existing gravel 44,- 22' and 22 to 30' wide.
Shoulders: Resurfaced gravel 4' wide along 22' width.
Graded: 44' to 30' single
Right of Way: 50'

Bids Received: 7-23-45
Contract awarded: 8-1-45
Date of contract: 8-10-45
Contract in effect: 8-23-45
Working days started: 9-4-45
Date work started: 9-7-45

Completion time: 20 W. Days
Total: 20 W. Days
Contract Completed: 10-15-45
Working days used: 12
Work Accepted by Commissioner: 10-24-45

Amount of Original Contract:	$ 14,100.00
Extra Work:	2,251.60
Reductions:	3,329.10
Final Cost:	$ 13,022.50

Asbury Avenue, as a thoroughfare, was shut off to the public by the fencing in of Area #3 of the mammoth Naval Ammunition Depot at Earle. The two main gates to this area, one on the West and one on the East side, enter from Asbury Ave. This project was let under the Defense Highway Act of 1941 to resurface the portion of Asbury Ave. leading to the East Gate from the 44' width bridge overpassing the Central R.R. of N.J. tracks at Sta. 0+00 to the existing 30' width concrete pavement at Sta. 37+36. The contract is a bituminous pavement, Type A, resurfacing project. The existing crown throughout was built up with variable depths and widths of Bottom Course material and the entire roadway, was surfaced with an average 1½" thickness of Top Course material. Down the steep bridge approach grade, the full travelled width of 44 feet was surfaced while 22 feet in width was surfaced for remainder except the 136' taper on the southerly end to 30' wide. Road gravel was placed to build up the 7 foot shoulder on the left and the 10 foot shoulder on the right except on the CRR graded embankment. Paving was started on September 17, 1945 and was completed on September 20, 1945. All work, after delay in receiving the guard rail lumber was completed on October 15, 1945.

A Finishing Machine was used for spreading the Top Course of Type "A" wearing surface to produce a very fine, smooth riding roadway surface.

Asbury Avenue Access Road to
Naval Ammunition Depot at Earle

Closure Roads at Naval Ammunition Depot at Earle
Park Avenue Relocation Area #2
and Jerseyville-E.Freehold-Farmingdale Road Area #3
Fed. Aid Project # DA-NC-11

Middletown and Howell Townships — Monmouth County

General Contractor: Standard Bitulithic Co.
Bonding Company: U. S. Fidelity & Guaranty Co.
Resident Engineer: V. E. Markle - J. E. Dederick

Length of Project: 1.931 miles
Pavement: Single road 8" treated gravel 20' & 30' wide
Shoulders: 8" gravel 3' & 5' wide and variable
Graded: 30' and variable
Right of Way: 33' - 50' - 90'

Bids Received: 10-9-44
Contract awarded: 10-16-44
Date of Contract: 10-16-44
Contract in effect: 11-15-44
Working days started: 11-20-44
Date work started: 11-13-44

Completion time: 45 W. Days, Extensions: 5 W.D., Total: 50 W. Days
Contract Completed: 7-10-45
Working days used: 47
Work accepted by Commissioner: 7-18-45

Amount of Original Contract: $ 44,139.48
Extra Work: 4,933.38
Reductions: 177.35
Final Cost: 48,895.51
Amount completed in 1945: $ 36,185.51

A Vast area in Monmouth County reserved for the U.S. Naval Ammunition Depot resulted in the shutting off and closing of many township roads. This project provided for two such severed township roads under the Defense Highway Act of 1941 as a Federal reimbursement project. At Area #2 near Leonardo, Park Ave. from Bayview Cemetery was reconstructed and relocated part way over virgin territory to connect with Navesink Ave. with a 7% grade over hilly and irregular terrain requiring heavy cuts and fills. At the Earle Area #3 the East Freehold-Farmingdale Road was rerouted over an existing township roadway alignment to connect with State Route #33 at Jerseyville.

Work was started on the Park Ave. relocation on Nov. 13, 1944 and was carried on through the winter of 1944 and 1945 on the clearing, grading and drainage work. Gravel surface and shoulder work was completed here on April 24, 1945 and operations then moved to work the Jerseyville job while traffic compacted the gravel roadway of the Leonardo job. Drainage and grading work was completed at Jerseyville on May 5, 1945 and gravel surface and shoulders completed here on June 13, '45.

The bituminous surface treatment and pea gravel cover material was completed at the Park Ave. relocation on June 18, 1945 and the Jerseyville area was completed July 10, 1945.

Heavy downpours and cloudbursts during June caused very bad pavement and shoulder washouts at both the areas and put the contractor to considerable extra time and expense to repair the treated roadway, gravel shoulders and sod runoffs.

Maxwell Road - Eatontown
Tinton Av. to Wampum Brook, Access Road to Camp Woods
Fed. Aid Project # DA-WR-20

Boro of Eatontown — Monmouth County

General Contractor: Fred McDowell
Bonding Company: U.S. Fidelity and Guaranty Co.
Resident Engineer: J. E. Dederick

Length of Project: 0.298 miles
Pavement: Type A Top and bottom courses, total average thickness 2½ to 3", 18' to 26' wide.
Shoulders: Earth and gravel 1' to 4' wide.
Graded: 22' to 26'

Bids Received: 4-16-45
Contract Awarded: 4-20-45
Date of Contract: 4-27-45
Contract in effect: 5-11-45
Working days started: 5-21-45
Date work started: 5-9-45

Completion time: 10 W. Days
Contract Completed: 5-21-45
Working days used: 1
Work Accepted by Commissioner: 8-1-45

Amount of Original Contract:	$ 4,423.24
Extra Work:	622.43
Reductions:	650.30
Final Cost:	4,395.37

Maxwell Road, or Lewis Street, in the Borough of Eatontown received extensive use as an access road to Camp Woods, a unit of the U.S. Signal Corps at Fort Monmouth and for the Army use of the Eatontown Railroad Station of the Central Railroad of New Jersey located on this street. This 1575 lineal feet of Maxwell Road was contracted to be repaired under the Defense Highway Act of 1941 as a Federal reimbursement project.

From Station 0+00 at Tinton Ave. to Station 3+50 the existing pavement was scarified and reshaped and a 1½" thick course of Bottom material and a 1½" course of Top material was placed down this steep grade. From Sta. 3+50 to the end at Sta. 15+75 the existing pavement was built up on the sides to a flatter crown with variable thickness and widths of Bottom Course material and an average of 1½" thickness of Top Course material then spread over the existing pavement of the variable widths from 18 feet to 20 feet. Paving was started on May 16, 1945 and completed on May 21, 1945 which date completed all work on the job.

Maxwell Road - Eatontown

N. J. State Highway Department-Southern District
Contracts Awarded Previous to 1945 and Carried Forward
Road Work Only

R & S	Location	County	Type of Pv & Mileage			Adjusted Contract Amount	Completed Previous to 1945	Completed in 1945	To Complete
			Conc.	B.Conc.	Total				
24-22) 24N-1)	5th Street to Phillipsburg Toll Bridge Plaza	Warren	1.138	.455	1.593	$ 642,782.71	$ 105,900.00	$ 431,745.81	$ 105,136.90
56-1	Beach Thorofare Br.&Approach	Atlantic		.440	.440	131,527.99	57,578.28		73,949.71
	Naval Closure Rds. Earle Amm.Depot Leonardo & Jerseyville	Monmouth		Treated Gravel 1.931	1.931	48,895.51	12,710.00	36,185.51	
	Totals		1.138	2.826*	3.964	$ 823,206.21	$ 176,188.28	$ 467,931.32	$ 179,086.61

* Bit Conc. .895
* Treated 1.931

N. J. State Highway Department-Southern District
Contracts Awarded in 1945
Road Work Only

R & S	Location	County	Type of Paving & Mileage Bit. Conc.	R.Conc.	Total	Adjusted Contract Amount	Amount Completed 1945	Amount To Complete in 1946
4N-10B	Norwood Ave.-Deal Roseld Av. to Roosevelt Av.	Monmouth		.977	.977	$ 142,962.43	$ 3,050.00	$ 139,912.43
27-17	Nassau St. Resurfacing Princeton	Mercer	1.086		1.086	77,415.23	77,415.23	
26-24B	Van Syckles Corner to White Horse	Hunterdon		2.766	2.766	455,507.60		455,507.60
[illegible]-25C	White House Relocation to No. Branch Relocation	Hunterdon Somerset		2.004	2.004	240,052.15		240,052.15
35-34C	Matawan Crk. Br. Approaches	Monmouth	.437		.437	44,527.10	44,527.10	
35-38B	Morgan N.Y. & L.B. RR Bridge & Approaches	Middlesex		.120	.120	40,694.73		40,694.73
Asby Av.	Asbury Av. Acc. Rd. to Naval Depot	Monmouth	.708		.708	15,022.50	15,022.50	
Maxwell	Road, Eatontown	Monmouth	.298		.298	4,395.37	4,395.37	
	Totals	-	2.529	5.867	8.396	$1,018,577.11	$ 142,410.20	$ 876,166.91

SUMMARY OF CONSTRUCTION
PERFORMED DURING 1945
NEW JERSEY STATE HIGHWAY DEPARTMENT
SOUTHERN DISTRICT
ROAD WORK ONLY

	Bituminous Concrete	Treated Gravel	Penetration Macadam	Reinforced Concrete	Total Mileage	Contract Value of Work Performed
1. State Highway Work Awarded Previous to Jan. 1, 1945 - Carried into 1946						
	.895			1.138	2.033	$ 431,745.81
2. State Highway-Awarded in 1945 and Completed in 1945						
	1.523				1.523	$ 121,942.33
3. State Highway-Awarded in 1945 and Carried into 1946						
				5.867	5.867	$ 3,050.00
4. Access Roads & Other Federal Projects off State Highways						
	2.937				2.937	$ 53,603.38
Totals	5.355			7.005	12.360	$ 610,341.52

SOUTHERN DISTRICT

AVERAGE COMPRESSIVE STRENGTH of CORES from PLAIN & REINFORCED CONCRETE PAVEMENT LAID IN 1945

Rt.&Sec.	Contractor	Standard Cement	Air Entrained Cement	Coarse Aggregate	Fine Aggregate	Reg.28-32 Day Cores District Off. #	Av.	#	Lab.Av.	Test Slab Cores #	Lab.Av.	Remarks
24-22) &24N-1)	F.Berlanti & Sons, Inc.	Allentown		Steckel Sd. Co.	Hodgson Sd. & Gl. Co.	5	6672	3	6640			
				Average		5	6672	3	6640			
		Penn-Dixie		Steckel Sd. Co. & Portland Sd.Gl. Co.	Hodgson Sd. & Gl.Co.	14	6466	8	6300			
				Average		14	6466	8	6300			
			Penn-Dixie	Steckels Sd. Co. & Portland Sd.Gl. Co.	Hodgson Sd Gl. Co.	33	5760	38	5889			2 extra bags per batch.
						4	5522	4	5222			
				Average		37	5734	42	5823			
			Penn-Dixie	Steckels Sd. Co.	Hodgson Sd.Gl.Co.	6	4479	6	4479			8" Base Course
				Average		6	4479	6	4479			

Yearly Average

		#	Av.	#	Lab.Av.
10" R. C. Pavement	Allentown - Standard Cement	5	6672		
	Penn-Dixie " "	14	6466		
	Penn-Dixie Air Entrained Cement	37	5734		
	Total for all Cements	56	5607	53	5966
8" Base Course		6	4479	6	4479

NORTHERN CONSTRUCTION DISTRICT CONTRACTS LET IN 1945 & COMPLETED

Route	Section	Local Name	County	LENGTH & TYPE OF PAVEMENT: Reinf. Conc.	Plain Conc.	Bit. Conc. on Rein.Conc.	Total	Revised Contract Amount	Amount Completed in 1945	Amount to be completed in 1946
	State Highway Projects									
S-3	5	Clearing Right of Way	Bergen					740.00	740.00	
6	3	Storm Drain	Bergen					9,365.28	9,365.28	
21	2C	Poinier St.-Lafayette St. Widening	Essex			0.0947	0.947	76,188.13	76,188.13	
								86,293.41	86,293.41	
		Construction Project Uncompleted in 1945								
25	4D,5D,6C, 7D & 8H Repairs		Middlesex & Union	18.3			18.3	264,039.46	213,802.00	50,237.46

ANNUAL REPORT FOR 1945

NEW JERSEY STATE HIGHWAY DEPT.

Division Of Bridges.

For the year 1945 the organization of the Bridge Division consisted of an average of 28 employees.

The personnel is classified as follows:

1 - Bridge Engineer
1 - Assistant Bridge Engineer
2 - Senior Bridge Designers
6 - Bridge Designers
4 - Jr. Bridge Designers
2 - Bridge Detailers
7 - Resident Engineers
1 - Senior Bridge Inspector
1 - Bridge Inspector
1 - Sr. Auditor
1 - Head Clerk-Stenographer
1 - Stenographer.

3 - In the Armed Forces of the United States

12 - On voluntary lay-off, employed in War industry.

6 - On leave of absence, serving as civilian employees of the Army and Navy Department.

The work during 1945 has been divided into the following classes:

	Adjusted Contract Price	Value of Work Done In 1944	Value of Work Done In 1945	Value of Uncompleted Work
1. Bridge contracts on State Highways let in 1941 and under construction in 1945:				
Highway & Stream Bridges	$ 869,810.07	$83,487.73	$195,760.33	
2. Bridge contracts on State Highways let in 1942 and under construction in 1945:				
Highway Bridges	1,033,777.16	0	0	$ 365,683.58
3. Bridge contracts on State Highways let in 1944 and under construction in 1945:				
Highway & Stream Bridges	234,843.43	0	78,323.20	0
4. Bridge contracts on State Highways let in 1945:				
Highway, Stream & RR Bridges	1,207,155.85	-	493,209.09	713,496.76

TOTALS FOR BRIDGES UNDER CONSTRUCTION IN 1945:

Adjusted Contract Price $3,345,586.51

Value of Work Done in 1945 .... $767,292.62

Value of Uncompleted Work $1,079,630.34

During the past year contracts for the construction of bridges were awarded as follows:

Highway Stream & R.R. Bridges on State Highways -	13

During the past year work was continued on 7 Highway and Stream Bridges on State Highways which were let in 1941, 1942 and 1944.

During the past year the office force has been employed principally in the preparation of plans for bridges on the Post-War Program.

CONTRACTS ON STATE HIGHWAYS LET IN 1941 AND UNDER CONSTRUCTION IN 1945

Route No.	Sec.	Local Name	Contract Price	Adjusted Contract Price	Value of Work done in 1944	Value of Work done in 1945	Official Starting Date	Date or % Completed
S-3	1	Erie Railroad & Berry Creek Viaduct	$689,539.50	869,810.07	83,847.73	195,760.33	6-20-41	9-20-45

VIADUCT OVER BERRY'S CREEK AND ERIE RAILROAD

Route #S-3, Sec. #1
Sta. 206 ±
Rutherford - Bergen County

Type of Structure	Steel Deck Beams on Concrete Piers
Width of Roadway on Bridge	2 @ 38'-0" Isl. 4'-0"
Width of Sidewalk on Bridge	2 @ 4'-0"
Length of Spans	2 @ 63'-0"; 8 @ 72'-0"
Length of Bridge Deck on C of Roadway	734' - 6-1/2"
Deck Covering	Concrete
Type of Foundation	Concrete on timber and steel piles
Contractor	Fehlhaber Pile Co., Inc.
Inspector in Charge of Work	H. R. Gabriel, Resident Engineer
Bonding Company	The Aetna Casualty & Surety Co.
Official Starting Date	June 20, 1941
Work Started	3/23/42
Working days specified	275 working days
Date of Completion	9/20/45
Engineer's Estimate of Cost	$737,609.00
Contract Price	$689,539.50
Adjusted Contract Price	$869,810.07
Value of work done in 1942	$290,600.37 including structural steel at site
Value of work done in 1943	$299,961.64
Value of work done in 1944	$ 83,487.73
Value of work done in 1945	$195,760.33

REMARKS: Work of the contract was delayed due to instability of approach embankments and inability to obtain foundation piles.

Final payment on Contract being withheld pending outcome of Contractor's Claim for added cost of superstructure.

BRIDGE CONTRACTS LET IN 1942 AND UNDER CONSTRUCTION IN 1945

BRIDGES ON STATE HIGHWAYS.

ROUTE NO.	SECTION	LOCAL NAME	CONTRACT PRICE	ADJUSTED CONTRACT PRICE	VALUE OF WORK DONE IN 1944	VALUE OF WORK DONE IN 1945	STARTING DATE	DATE OR % COMPLETED
(R) 56	Absecon Boulevard	Venice Lagoon	$98,911.20	$104,729.87	0	0	1-30-42	99
(R) 56	Absecon Boulevard	Beach Thorofare	936,574.60	929,047.29	0	0	1-30-42	61
			$1,035,485.80	$1,033,777.16	0	0		

(R) = Lot with roadway contract.

Work on the above bridges was discontinued in 1943 until critical materials can be obtained.

Sheet #6

VENICE LAGOON

Route #56, Absecon Boulevard
Sta. 257±

Atlantic City - Atlantic County

Type of Structure	Concrete Pile Trestle
Width of Roadway on Bridge	2 @ 35'-0"; Isl. 4'-0"
Width of Sidewalks on Bridge	2 @ 6'-0"
Length of Spans	9 @ 20'-4"
Length of Bridge Deck on ℄ of Roadway	183'-0"
Deck Covering	Concrete
Type of Foundation	Concrete Piles and Timber Piles at Abutments.
Contractor	Ole Hanson
Inspector in Charge of Work	M.L. Vail, Resident Engineer
Bonding Company	Fidelity & Deposit Co.
Official Starting Date	1/30/42
Work Started	2/9/42
Working days specified	250
Percent of completion 12/31/45	99%
Engineer's Estimate of Cost	$114,317.60
Contract Price	$98,911.20
Adjusted Contract price	$104,729.87
Value of work done in 1942	$ 47,477.38
Value of work done in 1943	$56,205.19
Value of work to complete	$ 1,047.30

REMARKS: Roadway work included in contract but not in above costs. This bridge was included in same contract with Beach Thorofare Bridge. Work suspended May 31, 1943. Due to shortage of Critical Materials.

BEACH THOROFARE

Route #56, Absecon Boulevard

Sta. 251 ±

Atlantic City - Atlantic County

Type of Structure	Bascule Draw Span and Deck beam Approaches.
Width of Roadway on Bridge	2 @ 35'-0"; Isl. 4'-0"
Width of Sidewalk " "	2 @ 8'-6"
Length of Spans	Basc. 1@ 60'-4"; 2 @ 68'-0"; 1 @ 69'-0"; 1 @ 66'-4"; 2 @ 48'-0"
Length of Bridge Deck on C/ of Roadway	474'-11"
Deck Covering	Steel Grid on Draw Span-Concrete on others.
Type of foundation	Concrete on piles
Contractor	Ole Hanson
Inspector in Charge of Work	M. L. Vail, Resident Engr.
Bonding Company	Fidelity & Deposit Co.
Official Starting Date	1/30/42
Work Started	1/22/42
Working days specified	250
Percent of Completion 12/31/45	61
Engineer's Estimate of Cost	$989,417.85
Contract Price	$936,574.60
Adjusted Contract Price	$929,047.29
Value of Work done in 1942	$402,600.03
Value of Work done in 1943	$161,810.98
Value of Work to complete	$364,636.28

REMARKS: Roadway work included in contract but not in above costs. Work discontinued on May 31, 1943 until critical materials can be obtained.

Sheet #8

CONTRACTS ON STATE HIGHWAYS LET IN 1944 AND UNDER CONSTRUCTION IN 1945

ROUTE	SECTION	LOCAL NAME	CONTRACT PRICE	ADJUSTED CONTRACT PRICE	VALUE OF WORK DONE IN 1945	STARTING DATE	DATE OF OR % OF COMPLETION
S-3	1	Berry's Creek Bridge Extension	$124,081.42	$122,197.91	$7,331.87	7/1/44	4-23-45
S-3	1D(R)	Rt. 3 South Bound over Rt. S-3 West Bound	41,542.66	42,834.02	9,728.98	10/9/44	4-12-45
24N	1 (R)	Underpass at West Bound Ramp	52,666.28	53,767.27	45,218.12	11/2/44	10-17-45
24N	1 (R)	Ingersoll Rand Plant Bridge Extension	17,131.50	16,044.23	16,044.23	11/2/44	9-6-45
			$235,421.88	$234,843.43	$78,323.20		

Bridges marked thus (R) included in Roadway Contract.

ROUTE S-3, SECTION #1

County	Bergen
Municipality	East Rutherford and Rutherford
Local Name	Berry's Creek Bridge Extension
Federal Aid Project No.	SN-FAP 186-A(1)
Type of Structure	Longitudinal steel beams and concrete deck
Width of Roadway on Bridge	2 @ 38'-0"
Width of Sidewalk " "	2 @ 4'-0"
Length of Spans	2 @ 66'-0" East; 2 @ 75'-0" West
Length of Bridge Deck on Ø of Rdway	132'-0" East end 150'-0" West end
Deck Covering	Concrete
Type of Foundation	Concrete spread footings
Contractor	Ell-Dorer Contracting Co.
Bonding Company	American Surety Company
Official Starting Date	7-1-44
Work Started	7-6-44
Working days specified	100
Date of completion	4-23-45
Engineer's Estimate of Cost	$173,953.50
Contract Price	$124,081.42
Adjusted Contract Price	$122,197.91
Value of Work Done in 1944	$114,866.04
Value of Work Done in 1945	$ 7,331.87

ROUTE S-3, SECTION 1-D

Sta. 152+87.91

County	Bergen
Municipality	Rutherford
Local Name	Route 3 South Bound over Rt. S-3 West Bound
Federal Aid Project No.	SN-FAP 186-A(1)
Type of Structure	Longitudinal steel beams and concrete deck
Width of Roadway on Bridge	38'-0"
Width of Roadway under Bridge	38'-0"
Length of Spans	49'-0"
Deck Covering	Concrete
Type of Foundation	Concrete on timber piles
Contractor	Standard Bitulithic Company
Inspector in charge of work	H. R. Gabriel
Bonding Company	Massachusetts Bonding & Insurance Co.
Official Starting Date	10-9-44
Work started	9-1-44
Working days specified	70
Date of Completion	4-12-45
Engineer's Estimate of Cost	$47,488.55
Contract Price	$41,542.66
Adjusted Contract Price	$42,834.02
Value of Work Done in 1944	$33,105.04
Value of Work Done in 1945	$ 9,728.98

REMARKS: Bridge included in roadway contract.

Structural Steel not included in contract.

Purchased directly by the State for $3,309.35

ROUTE 24-N, SECTION 1

Sta. 215+35.64

WEST BOUND RAMP

County	Warren
Municipality	Phillipsburg
Local Name	Underpass at West Bound Ramp
Federal Aid Project No.	SN-FAP 32-E(1)
Type of Structure	Concrete T Beams
Width of Roadway on Bridge	24'-0"
Width of Sidewalk " "	One @ 8'-0"
Width of Roadway under Bridge	32'-0"
" " Sidewalk " "	Two @ 8'-0"
Length of Bridge Deck on ℄ of Roadway	58'-3"
Length of Spans	56'-6"
Deck Covering	Concrete
Type of Foundation	East Abutment Concrete West Abutment concrete on timber piles
Contractor	Fred Berlanti & Son Inc.
Inspector in charge of work	A. E. Lee
Bonding Company	Hartford Accident & Indemnity Company
Official starting date	11-2-44
Work started	10-19-44
Working days specified	140
Date of completion	10-17-45
Engineer's Estimate of Cost	$53,996.80
Contract Price	$52,666.28
Adjusted Contract Price	$53,767.27
Value of work done in 1944	$ 8,549.15
Value of work done in 1945	$45,218.12

REMARKS: Bridge included in Roadway contract.

ROUTE #24 - SECTION #22

STA. 152-81.10

WIDENING OF APPROACH SPAN OF INGERSOLL-RAND BRIDGE OVER D.L.&W RR

County	Warren
Municipality	Lopatcong Township
Local Name	Ingersoll-Rand Co. Bridge Extension
Federal Aid Project No.	SN-FAP 32-E(1)
Type of Structure	Concrete beams and slabs
Width of Roadway on Bridge	22'-0"
Width of Sidewalk on Bridge	4'-0"
Length of Spans	One @ 15'-1/2"; One @ 22'-10"
Length of Bridge Deck on ℄ of Roadway	44'-4-1/2"
Deck Covering	Concrete
Type of Foundation	Concrete on rock
Contractor	Fred Berlanti & Son Inc.
Inspector in charge of work	H. M. Bergen
Bonding Company	Hartford Accident & Indemnity Company
Official starting date	11-3-44
Work started	6-13-45
Working days specified	140
Engineer's Estimate of Cost	$23,236.00
Contract Price	$17,131.50
Adjusted Contract Price	$16,044.23
Value of work done in 1945	$16,044.23

REMARKS: Bridge included in Roadway Contract.

Final payment being withheld until completion of Road work.

CONTRACTS ON STATE HIGHWAYS LET IN 1945

ROUTE	SECTION	LOCAL NAME	CONTRACT PRICE	ADJUSTED CONTRACT PRICE	VALUE OF WORK DONE IN 1945	STARTING DATE	DATE OR % OF COMPLETION
25-A		Passaic River Bridge (Substructure)	$441,373.00	$410,269.12	$361,036.83	8-10-45	88
		Brigantine Bridge over Absecon Channel	190,069.85	190,069.85	53,219.56	8-10-45	28
35	38-B	Overpass N.Y.&L.B.R.R.	52,035.90	52,035.90	0	-	0
*4	5-A	Underpass at Erie R.R.	141,133.70	141,133.70	0	-	0
28	24-B	So.Branch Rockaway River	12,146.00	12,146.00	348.38	11- 5-45	3
28	24-B	" " " "	17,483.00	17,483.00	0	11- 5-45	0
28	24-B	" " " "	12,349.50	12,349.50	617.48	11- 5-45	5
28	24-B	" " " "	31,256.75	31,256.75	5,626.22	11- 5-45	18
25	Conn. Link	Reconstruction of Pavement,Pulaski Skyway	66,270.40	66,314.32	66,314.32	7- 9-45	10-24-45
25	2D & 3D	Extension Chandlers Run Bridge	25,959.90	26,291.01	5,000.00	11- 5-45	19
25	2D & 3D	Route 38 Bridge over Circle	53,487.28	51,304.78	0	11-20-45	0
25	2D & 3D	Route 45 Bridge over Circle	53,499.13	51,234.13	1,046.30	11-19-45	2
25	2D & 3D	Route 38 & 45 Bridge over Circle	91,466.77	84,161.77	0	11-20-45	0
25	2D & 3D	Retaining Walls	62,846.02	61,106.02	0	11-20-45	0
			$1,251,377.20	1,207,155.85	$493,209.09		

* Contract Annuled

Route #25-A

Passaic River Piers.

County	Essex & Hudson
Municipality	Newark & East Newark
Project	River Piers
Local Name	Passaic River Bridge
Type of Structure	Concrete Piers
Width of Roadway on Bridge	2 @ 38'-0"
Width of Sidewalk " "	2 @ 6'-8"
Length of Spans	200 ft. clear channel
Type of Foundation	Pneumatic Caisson on Rock
Contractor	Senior & Palmer Inc.
Inspector in Charge of Work	H. R. Gabriel
Bonding Company	Maryland Casualty Co.
Official Starting Date	8-10-45
Work Started	8-10-45
Working days specified	175
Percent of Completion by 12/31/45	88
Engineer's Estimate of Cost	$434,345.00
Contract Price	$441,373.00
Adjusted Contract Price	$410,269.12
Value of Work Done in 1945	$361,036.83
Value of Work to be done in 1946	$ 49,232.29

REMARKS: Contract included two concrete piers faced with granite and fender system.

Sheet #15.

BRIGANTINE BRIDGE OVER
ABSECON CHANNEL

Atlantic City to Brigantine

County	Atlantic
Municipality	Atlantic City
Local Name	Brigantine Bridge over Absecon Channel
Type of Structure	Steel pile trestle and concrete deck
Width of Roadway on Bridge	30'-0"
Length of Spans	7 @ 25'-0"; 5@ 51'-0"; 6@ 50'-4"
Length of Bridge Deck on ø of Roadway	367'-0" west - 413"-0" East
Deck Covering	Concrete slab
Type of Foundation	Steel Piles
Contractor	Charles H. Vachris Inc.
Inspector in Charge of Work	C. D. Weller
Bonding Company	Fidelity & Deposit Co. of Md.
Official Starting Date	Aug. 10, 1945
Work Started	9-19-45
Working days specified	125
Percent of Completion by 12/31/40	28%
Engineer's Estimate of Cost	$176,939.40
Contract Price	$190,069.85
Adjusted Contract Price	$190,069.85
Value of Work Done in 1945	$ 53,219.56
Value of Work to be done in 1946	$136,850.29

REMARKS: This structure is to replace the section of existing trestle which was destroyed by storm.

Sheet #16

Route #35, Section #38-B

Sta. 86+76.15

County	Middlesex
Municipality	Morgan
Local Name	Overpass N.Y. & L.B.R.R. Superstructure
Type of Structure	Steel Thru Girder
Width of Roadway on Bridge	32'-0"
Width of Sidewalk " "	1 @ 7'-4-1/2"
Length of Spans	108'-4"
Length of Bridge Deck on ℄ of Roadway	116'-2"
Deck Covering	Concrete
Type of Foundation	Concrete
Contractor	Weldon Contracting Co.
Bonding Company	Seaboard Surety Co.
Working days specified	90
Percent of Completion by 12/31/45	0
Engineer's Estimate of Cost	$45,041.20
Contract Price	$52,035.90
Adjusted Contract Price	$52,035.90

REMARKS: Contract includes only deck of bridge. Start of work postponed until delivery of structural steel.

Route #4, Section #5-A

Sta. 43+83.35

County	Bergen
Municipality	E. Paterson & Fairlawn
Project	Underpass at Erie R.R.Br. #15.39
Local Name	Underpass at Erie R.R. at Warren Point
Type of Structure	Steel Thru Girder
Width of Roadway Under Bridge	2 @ 36'-0"
" " Sidewalk " "	2 @ 8'-0"
Length of Spans	2 @ 51'-4"
Deck Covering	Ballast & Double Track
Type of Foundation	Timber Piles
Contractor	Ell-Dorer Contracting Co.
Engineer's Estimate of Cost	$144,322.00
Contract Price	$141,133.70

REMARKS: Contract Annuled

To be readvertised as Federal Aid Project.

Sheet #18

Route #28, Sec. 24-B

Sta. 374+21

County	Hunterdon
Municipality	Readington Twp.
Local Name	So. Branch Rockaway River
Type of Structure	Concrete Abutments & Slab.
Width of Roadway on Bridge	2 @ 37'-0"
Length of Spans	10'-0"
Length of Bridge Deck on ¢ of Roadway	12'-4"
Deck Covering	Fill and Roadway Pavement
Type of Foundation	Concrete
Contractor	Franklin Contracting Co.
Inspector in Charge of Work	A. H. Stetsor
Bonding Company	Standard Accident Insurance Co.
Official Starting Date	11-5-45
Work Started	12-13-45
Working days specified	120
Percent of Completion by 12/31/40	3
Engineer's Estimate of Cost	$11,757.50
Contract Price	$12,146.00
Adjusted Contract Price	$12,146.00
Value of Work Done in 1945	$ 364.38
Value of Work to be done in 1946	$11,781.62

Sheet #19

Route #28, Sec. #24-B

Sta. 392+40

County	Hunterdon
Municipality	Readington Township
Local Name	So. Branch Rockaway River
Type of Structure	Concrete Abutments & Slab.
Width of Roadway on Bridge	2 @ 37'-0"
Length of Spans	10'-0"
Length of Bridge Deck on ¢ of Roadwy	12'-4"
Deck Covering	Fill and Roadway Pavement
Type of Foundation	Concrete
Contractor	Franklin Contracting Co.
Inspector in Charge of Work	A. H. Stetser
Bonding Company	Standard Accident Insurance Co.
Official Starting Date	11-5-45
Work Started	Not started in 1945
Working days specified	120
Percent of Completion by 12/31/40	0
Engineer's Estimate of Cost	$17,166.70
Contract Price	$17,483.00
Adjusted Contract	$17,483.00

Route #28, Sec. #24-B

Sta. 408+15

County	Hunterdon
Municipality	Readington Township
Local Name	So. Branch Rockaway River
Type of Structure	Concrete Abutment and Slab
Width of Roadway on Bridge	2 @ 37'-0"
Length of Spans	8'-0"
Length of Bridge Deck on ¢ of Roadwy	10'-4"
Deck Covering	Fill and Roadway Pavement
Type of Foundation	Concrete
Contractor	Franklin Contracting Co.
Inspector in Charge of Work	A. H. Stetser
Bonding Company	Standard Accident Insurance Co.
Official Starting Date	11/5/45
Work Started	12/13/45
Working days specified	120
Percent of Completion by 12/31/45	5%
Engineer's Estimate of Cost	$11,965.50
Contract Price	$12,349.50
Adjusted Contract Price	$12,349.50
Value of Work Done in 1945	$ 617.48
Value of Work to be done in 1946	$11,732.02

Route #28, Sec. #24-B

Sta. 455+74

County	Hunterdon
Municipality	Readington Township
Local Name	So. Branch Rockaway River
Type of Structure	Conc. Abutments & Slab
Width of Roadway on Bridge	37'-0"
Width of Sidewalk " "	1 @ 2'-0" - 1 @ 6'-0"
Length of Spans	2 @ 31'-7"
Length of Bridge Deck on ¢ of Roadwy	66'-10"
Deck Covering	Concrete deck slab.
Type of Foundation	Concrete
Contractor	Franklin Contracting Co.
Inspector in Charge of Work	A. H. Stetser
Bonding Company	Standard Accident Insurance Co.
Official Starting Date	11/5/45
Work Started	11/5/45
Working days specified	120
Percent of Completion by 12/31/45	18%
Engineer's Estimate of Cost	$30,091.10
Contract Price	$31,256.75
Adjusted Contract Price	$31,256.75
Value of Work Done in 1945	$ 5,626.22
Value of Work to be done in 1946	$25,630.53

Route #25
Conn. Link
Sta. 171+89 - 182+00

County	Hudson
Municipality	Jersey City
Project	Concrete Paving
Local Name	Reconstruction of Pavement Pulaski Skyway
Type of Structure	Existing Steel Viaduct
Width of Roadway on Bridge	48'-6"
Length of Bridge Deck on ¢ of Roadwy	1010'-4"
Deck Covering	Concrete
Contractor	Nesto Construction Co.
Inspector in Charge of Work	H. R. Gabriel
Bonding Company	Standard Accident Insurance Co.
Official Starting Date	7/9/45
Work Started	7/11/45
Working days specified	50
Date of Completion	10/24/45
Engineer's Estimate of Cost	$81,480.00
Contract Price	$66,270.40
Adjusted Contract Price	$66,314.32

This contract consisted of the removal of existing asphalt block pavement and its replacement with reinforced concrete.

Sheet #23

ROUTE 25 - SECTION 2D & 3D
STATION 91+70

County	Camden
Municipality	Camden
Project	Entrance Road
Local Name	Extension, Chandlers Run Bridge
Federal Aid Project No.	-
Type of Structure	Concrete T, Beams
Width of Roadway on Bridge	2 @ 32'-0"
Width of Sidewalk " "	2 @ 8'-0"
Width of Roadway under Bridge	-
" " Sidewalk " "	-
Length of Spans	32'-0"
Length of Bridge Deck on ℄ of Roadway	33'-0"
Deck Covering	Concrete
Type of Foundation	Existing Concrete
Contractor	Francis A. Cannuso & Son
Inspector in charge of work	Patrick McCullough
Bonding Company	Standard Accident Insurance Company
Official starting date	November 20, 1945
Work started	November 5, 1945
Working days specified or	
Date of completion specified	July 1, 1946
Date of completion or	
Percent of completion by 12/31/45	19%
Engineer's Estimate of Cost	$27,214.75
Contract Price	$25,959.90
Adjusted Contract Price	$26,291.01
Value of work done in 1945	$ 5,000.00
Value of work done in 1946	$21,291.01

REMARKS:

ROUTE 25 - SECTION 2D & 3D
STATION 98+99.20

County	Camden
Municipality	Camden
Project	Entrance
Local Name	Route #38 Bridge over Circle
Federal Aid Project No.	-
Type of Structure	Concrete T. Beams
Width of Roadway on Bridge	26'-0"
Width of Sidewalk on Bridge	-
Width of Roadway Under Bridge	40'-0"
Width of Sidewalk under Bridge	-
Length of Spans	-
Length of Bridge Deck on ℄ of Roadway	90'-0"
Deck Covering	Concrete
Type of Foundation	Concrete on Steel shell piles
Contractor	Francis A. Cannuso & Son
Inspector in charge of work	Patrick McCullough
Bonding Company	Standard Accident Insurance Company
Official starting date	November 20, 1945
Work started	-
Working days specified or	-
Date of completion specified	July 1, 1946
Date of completion or	-
Percent of completion by 12/31/45	-
Engineer's Estimate of Cost	$59,579.57
Contract Price	$53,487.28
Adjusted Contract Price	$51,304.78
Value of work done in 1945	-
Value of work done in 1946	$51,304.78

REMARKS:

ROUTE 25 - SECTION 2D & 3D
STATION 98+81

County	Camden
Municipality	Camden
Project	Entrance
Local Name	Route 45 Bridge over Circle
Federal Aid Project No.	-
Type of Structure	Concrete T. Beams
Width of Roadway on Bridge	26'-0"
Width of Sidewalk " "	-
Width of Roadway Under Bridge	39'-0"
" " Sidewalk " "	-
Length of Spans	-
Length of Bridge Deck on ⌀ of Roadway	87'-0"
Deck Covering	Concrete
Type of Foundation	Concrete on Steel Shell Piles
Contractor	Francis A. Cannuso & Son
Inspector in charge of work	Patrick McCullough
Bonding Company	Standard Accident Insurance Company
Official Starting Date	November 20, 1945
Work started	November 19, 1945
Working days specified or	
Date of completion specified	July 1, 1946
Date of completion or	
Percent of completion by 12/31/45	2%
Engineer's Estimate of Cost	$59,402.18
Contract Price	$53,499.13
Adjusted Contract Price	$51,234.13
Value of work done in 1945	$ 1,046.30
Value of work done in 1946	$50,187.83

REMARKS:

ROUTE 25 - SECTION 2D & 3D
STATION 95-09.25

County	Camden
Municipality	Camden
Project	Entrance Road
Local Name	Routes #38 & #45 Bridge over Circle
Federal Aid Project No.	-
Type of Structure	Concrete T. Beams
Width of Roadway on Bridge	Aver. 38'-0"
" " Sidewalk " "	-
" " Roadway under Bridge	35'-0"
" " Sidewalk " "	-
Length of Spans	1 @ 41.67 - 1 @ 43.29
Length of Bridge Deck on ℄ of Roadway	86'-0"
Deck Covering	Concrete
Type of Foundation	Concrete on Steel Shell Piles
Contractor	Francis A. Canuso & Son
Inspector in charge of work	Patrick McCullough
Bonding Company	Standard Accident Insurance Company
Official starting date	November 20, 1945
Work started	-
Working days specified or	-
Date of completion specified	July 1, 1946
Date of completion or	-
Percent of completion by 12/31/45	-
Engineer's estimate of cost	$97,977.75
Contract Price	$91,466.77
Adjusted contract price	$84,161.77
Value of work done in 1945	-
Value of work done in 1946	$84,161.77

REMARKS:

ROUTE 25 - SECTION 2D & 3D
STATION 89+18 to 94+29

County	Camden
Municipality	Camden
Project	Entrance Road
Local Name	Retaining Walls
Federal Aid Project No.	-
Type of Structure	Concrete
Width of Roadway on Bridge	34'-0"
Width of Sidewalk on Bridge	-
Width of Roadway under Bridge	-
" " Sidewalk " "	-
Length of Spans	-
Length of Retaining Walls on ℄ of Roadwy	431'-0"
Deck Covering	-
Type of Foundation	Concrete on Timber piles " " Steel Shell piles
Contractor	Francis A. Canuso & Son
Inspector in charge of work	Patrick McCullough
Bonding Company	Standard Accident Insurance Company
Official starting date	November 20, 1946
Work started	-
Working days specified or	
Date of completion specified	July 1, 1946
Date of completion or	-
Percent of completion by 12/31/45	-
Engineer's Estimate of cost	$70,508.50
Contract Price	$62,846.02
Adjusted Contract Price	$61,106.02
Value of work done in 1945	-
Value of work done in 1946	$61,106.02

REMARKS:

ANNUAL REPORT

OF THE

PLANNING BUREAU

NEW JERSEY STATE HIGHWAY DEPARTMENT

FOR THE YEAR

1945

1945 ANNUAL REPORT

HIGHWAY PLANNING BUREAU

1945 ANNUAL REPORT

HIGHWAY PLANNING BUREAU

The work of the Highway Planning Bureau, of which the Statewide Highway Planning Survey is a part, was carried forward during 1945. Numerous operations, surveys, research and studies were initiated, carried on or completed. Some studies of a continuous nature will necessarily extend into the following year or years.

Some of the major items of the work carried on during 1945 are outlined or discussed briefly as follows:

Proposed Comprehensive State Highway System

The report of the Highway Planning Bureau entitled "A Comprehensive State Highway System" completed September 1944 and submitted to the State Highway Commissioner, outlined a basis for a gradual expansion of the State Highway System during the next 25 or 30 years. In December 1944 the Commissioner appointed a Departmental Committee to review the report.

The Review Committee with Mr. C. Wimpenny as Chairman, submitted a preliminary report dated February 23, 1945, and its final report on August 24, 1945. In substance, the Review Committee was opposed to a consideration at the present time of any substantial enlargement of the State Highway System. The attitude of the Committee was summed up in the first sentence of the fourth paragraph of page 77 of its "Final Report of August 24, 1945", as follows: "Any proposal by the Highway Department for a major legislative enlargement of the State Highway System should be postponed until the present system is substantially completed". Assistant State Highway Engineer E. Kilpatrick, who was a member of the committee, disagreed with its findings and submitted a minority report.

An independent discussion of the report on "A Comprehensive State Highway System, September 1944" was made by the Special Engineer of the Department, who made some general comments on the preliminary report of the Review Committee, all of which contained some constructive suggestions and interesting facts and reasoning bearing on the advisability of outlining a long range plan within a reasonable period of time.

All of these reports were carefully studied by the Highway Planning Bureau and conferences were held with representatives of the Division of Planning and Engineering of the Department of Economic Development. A number of revisions were made in the original plan for a Comprehensive State Highway System, some of which revisions were suggested by the Department of Economic Development.

Further studies, analyses and estimates are still to be made before a final proposal is fully outlined and presented.

Study and Report on Improvements of the Holland Tunnel Plaza

A study and report was made and submitted on May 21, 1945, on "Improvements of Holland Tunnel Plaza, Jersey City and Other Related Work". The study included first, the traffic needs at and adjacent to the Holland Tunnel Plaza in Jersey City. Consideration was given to necessary restrictions at the Tunnel due to reasons of safety; to conditions at the Viaduct approach and proposed straightening of alignment and other feasible improvements; the sufficiency of the Tunnel approach along the 12th Street Plaza from the easterly end of the present viaduct to the tunnel portal; and the insufficiency of the present highway viaduct which provides for only 2 lanes in each direction against a minimum need of 4 lanes or more in each direction.

Part 2 of this report discussed the "Proposed Improvements". Several plans are discussed and worked out in some detail.

Federal Aid Secondary System

Under the requirements and guidance of the Public Roads Administration, studies had begun for the selection of routes in the respective counties, to constitute the "Federal Aid Secondary System".

The allocation of mileage for each county was made according to a formula conforming to certain rules of the Public Roads Administration and subject to its approval. The selection of the specific routes in each County, made by the Highway Planning Survey, under the direction and with the advice of the Chief of the Highway Planning Bureau, is subject to approval of the respective county officials in each county, of the State Highway Commissioner, and ultimately of the Public Roads Administration.

While a substantial part of the work was performed during the previous year, the tentative selection of the routes for this System was completed during this year, with revisions suggested by the County Engineers and the Supervisor of State Aid Projects incorporated in the System. To date all of the County authorities excepting Hudson County have finally approved the selected routes in the respective counties. Hudson County has tentatively approved the System but still has to send its official resolution of approval.

Data and duplicate maps were prepared and are ready for submission to the Public Roads Administration for final approval. A special report prepared by the Chief of the Highway Planning Bureau on the Federal Aid Secondary System in the State of New Jersey, dated September 24, 1945, and discussing the entire subject more comprehensively is attached as a Supplement to this report.

State Aid to Counties

Considerable attention was given to the problem of State Aid to counties and municipalities. Several basic formulae were studied and outlined and computation made as to the amounts that would be allocated to each county under these formulae.

Theory and Design of Concrete Pavement Slabs

An investigation and analysis was made on the subject of the "Theory and Design of Concrete Pavement Slabs". The question of length of slabs, deflections and loadings were considered and tables and formulae developed. Need and type of expansion joints, contraction joints, longitudinal joints, and reinforcing were studied. Other related matters that might involve the protection of the integrity of the pavement structure were given some thought and some of the preliminary work for the preparation of the report on the subject was prepared.

Origin and Destination Survey

The need for an origin and destination survey was studied in previous years and a report was submitted to the State Highway Commissioner, in 1944, on the advisability of carrying out such a survey. The preparation for the Newark Metropolitan Area origin and destination survey was actually begun in March 1945. The field work was practically completed by the end of the year and preparation of the coding manual is about to be started.

The field work of the survey, already completed, consisted of four major functions namely (a) sampling, (b) internal interview, (c) external interview, and (d) truck and taxi trip records. The area in which the study was to be conducted was first outlined and a cordon line established, including over 50 municipalities in the Newark Metropolitan Area.

(a) In sampling for selection of houses where the interviews were made, there were from 10 to 15 employees used. Approximately 14,000 samples were selected in the 50 municipalities. The following methods were used in the various municipalities sampled: Tax assessor records and maps; Sanborn maps with city directories; land use maps where available; field sampling in smaller municipalities. In each case the method more readily available and easier to carry out was used.

(b) The work of internal interviewing was carried out by one chief supervisor, three supervisors, one reviewer and from 30 to 35 interviewers. This work lasted from August through December. Two field offices were established for that work for the period in order to facilitate reporting for work assignments and general control.

(c) For the external survey there was one supervisor, four party chiefs with four interviewers for each party, and two utility men serving on all parties. Sixty different stations were operated on routes varying in traffic density from 1,000 vehicles per day to 35,000 vehicles per day. The services of six Motor Vehicle Department inspectors were utilized to direct traffic at these stations while the survey was in progress. Altogether about 145,000 interviews were obtained at the 60 stations. The work was carried on between August 29 and December 4 on days when the weather was favorable, exclusive of Saturdays and Sundays. Special lighting and other equipment was needed in this work.

(d) Truck and taxi interview. There were a total of about 2,200 truck and taxi interviews made by from six to eight interviewers. These interviewers had previously been employed on the internal survey. The truck and taxi interview samples were compiled from the motor vehicle registration card index file.

Preliminary to conducting the survey, conferences were held in Trenton and Newark with several governmental agencies. The interest of these agencies in the study was discussed but none of these agencies assumed any part of the cost of the cost of the survey. It was financed as a post-war investigation project with Federal Aid. The local municipalities, however, did furnish police protection and office quarters as needed for portions of the work.

The facts gathered in this origin and destination survey should provide much of the basic data required for planning future highways and for designing and for determination of the type of design and location of entrances.

Mapping and Drafting

The base maps of each county, completed during 1944, were used as a foundation for another series of maps designated as the general highway maps. These general highway maps show the features already shown on the base maps and in addition such data as the type of pavement of each road and the distance between important road intersections. A considerable portion of that work had been completed during 1944; the remaining maps were completed this year and approved by the counties.

The maps of the following counties were submitted to the Public Roads Administration for final approval: Bergen, Burlington, Camden, Cape May, Cumberland, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Salem, Sussex, Union and Warren. Final approval has been received for the Hunterdon and Morris County maps.

The road type of the Sussex general highway map was completed, checked and distances noted on the map.

Work had started during 1944 on the preparation of a map of New Jersey to the scale of 2 miles to the inch. The work was continued on this map during the year and the map is now about 40 percent complete. This map will be about 8 feet long and 4 feet wide, in 3 sheets. When complete it will show about the same features as those shown on the general highway map for the counties. It will be of convenient size for general reference, and in reduced size it may form the basis for future road maps for general distribution.

The draftsmen in the Newark office also assisted in the laying out work of the forms for the special loadometer and assisted in the origin and destination surveys.

Road Inventory and Railroad Crossing Study

During this year no field inventory was conducted on this work although the field inventory has not yet been entirely completed. Some work was continued in connection with railroad grade crossings and a study has been submitted by the Highway Planning Survey to the Engineer of Grade Crossing Eliminations to obtain ratings for these crossings from each railroad. The Public Utility Commission had been requested to assign priority ratings to the list of crossings but so far had reserved decision on this matter.

Traffic Counts and Loadometer Tests

No general statewide traffic counts have been made since 1940 when such counts were made on all rural roads and their principal extensions within urban areas. Tabulations on these counts have been typed and submitted to the Public Roads Administration. It is hoped that with the changing conditions of traffic new counts would be repeated as soon as conditions will permit and more men are available. When such counts are made they should be extended so as to include the more important streets in urban areas.

Loadometer tests, involving the stopping, weighing and measuring of trucks traveling on the road, have been made this year for the fifth time. Previously such tests had been made in 1940, 1942, 1943 and 1944. The tests this year were made during the first week of August at the general location used in the previous years survey. Work progressed on the compilation of the data which was not submitted by the end of the year because of the lack of personnel caused by the origin and destination survey being carried on.

Road Use

Work on this began during 1940 and was continued this year. The extension and coding of bus data was completed to give a 20 percent sample over the State. Cross checks and runs have been made on the tabulating machine to eliminate errors in the cards and to establish controls when performing the tabulation work for the road use tables. Approximately 10 road use tables were completed by the end of the year.

Road Life and Local Mileage Statistics

The determination of all improvement work done on State highways and other State roads, the location and kind of work done and the cost thereof, from the year 1919 to the present date was tabulated. Most of that work, including all road work previous to 1941 was completed by the end of 1944. Data on contracts of State highway construction was set up on R. L. - 1 forms. Records of maintenance costs are being investigated so that they might be included in this study and tabulation.

The local road mileage report, submitted annually, the information for which had previously been obtained by correspondence with or visits to the individual municipalities, has been temporarily suspended. The results previously secured have not been complete enough to warrant continuance of that work on this basis. It is hoped that when more personnel is available this work will be resumed with more satisfactory records obtained by new methods to be tried out.

Local Highway Financial Statistics and Special Studies

These statistics cover records of revenues and expenditures of municipalities for highway purposes. These reports have been made since 1941 and submitted annually to the Public Roads Administration. Data on the receipts and disbursements for highways and bridges on such local roads had been taken off the abstract audits of the municipalities for the years 1942 and 1943. Certain corrections requested by the Public Roads Administration were also made during the year on the 1941 report.

Under special studies, statistical reports are prepared for the Public Roads Administration, including assembling of highway data in usable form. These tabulations were prepared in the Trenton office of the Highway Planning Survey. Field data of origin and destination studies in the Trenton area, noting license plates, etc., was tabulated and submitted to the Traffic Engineer.

Administrative

The regular semi-monthly basis employees in this Bureau during the year were 31 with 7 on military leave and one on leave of absence. Of these all but 2 were engaged on the Highway Planning Survey. This is in addition to the special employees engaged on special work, especially that of the origin and destination survey as previously listed.

Report No. 51 on status of funds has been submitted to the Public Roads Administration on monthly basis by phase of work. Three vouchers on form P. R. 20 for reimbursement of funds were also submitted during the year. No additional funds were set up for Highway Planning work during 1945 except the $100,000 for the Newark

Metropolitan Area Origin and Destination Survey designated as the P. W. I. - 2 project.

A total of $936.00, realized from the sale of county maps, was turned over to the State Highway Department Auditing Division.

Future Work

Owing to the war conditions the work of the Bureau has been carried out during the last few years with an insufficient number of employees, many of which in one way or another had taken part in the war efforts. For that reason many of the activities of the Bureau have been retarded, but it is expected that in the future rapid progress will be made.

Sigvald Johannesson

Sigvald Johannesson
Chief, Highway Planning Bureau

April 26, 1946.

REPORT ON FEDERAL AID SECONDARY SYSTEM

STATE OF NEW JERSEY

By

Sigvald Johannesson

September 1945.

REPORT ON FEDERAL AID SECONDARY SYSTEM

STATE OF NEW JERSEY

CHARACTERISTICS OF NEW JERSEY

The State of New Jersey occupies the portion of the United States that borders on the Atlantic Ocean between the lower reaches of the North or Hudson River and the Delaware River, which in the early days was called the South River. It lies between 41° - 21' N. and 38° - 55' N. latitude and between 73° - 54' W. and 75° - 32' W. longitude. To the north New Jersey is bounded by the State of New York and to the west and south it is separated by the Delaware River and Bay from the States of Pennsylvania and Delaware. The total area of the State of New Jersey is 8,204 square miles, of which 7,505 square miles represent land area.

The greater portion of the northerly part of the State is characterized by a series of mountain chains running generally from the northeast to the southwest. The highest point reaches an elevation of 1877 feet above sea water. The mountains are mostly covered with trees, and in the valleys the land is fertile and largely used for dairy and other farming. The whole of this part of the State is dotted with lakes fed by mountain streams and is favored for vacation purposes as well as for permanent homes. The easternmost portion of the northerly part of the State, covering a strip about 15 miles wide westerly of the Hudson River, is generally less than 500 feet above sea level and is mainly urban in character. Although this part in area covers less than one-tenth of New Jersey, it contains more than one-half of the total population of the State.

In the central and southerly parts of New Jersey the country is mostly gently rolling or flat and its elevation is generally less than 100 feet above sea level. Along almost the entire shore front from Sandy Hook to Cape May, a distance of some 125 miles, there are broad and sandy beaches, used for recreational purposes. Westerly of these beaches approximately from Lakehurst southerly to Delaware Bay there is a strip of land averaging about 20 miles in width and largely covered with pine, scrub oak and cranberry bogs, which is unsuitable or unprofitable for cultivation but excellent for hunting and fishing. At Trenton and Camden there are fairly extensive urban areas, and many smaller towns are spread throughout the area. The remaining portions of the central and southerly areas are under cultivation, except where the land is low and subject to tidal or river inundation.

The mean annual temperature is about 52 degrees F., but the winters may be quite severe, particularly in the northerly parts. Snowfall varies from 40 inches in the northerly to 22 inches in the southerly counties. Total precipitation is 45 inches on the average and is fairly well distributed throughout the year. The sun shines during about 55 percent of the possible sunshine hours.

Politically the State is divided into 21 counties varying in size from 60 to 828 square miles, and the counties are subdivided into a total of 567 municipalities, including 234 townships, 255 boroughs, 52 cities, 23 towns and 3 villages.

In 1940 there were 4,160,165 people living in New Jersey, but the population is distributed quite unevenly. The density of population varies from less than 60 per square mile in Ocean and Sussex Counties to more than 14,000 in Hudson County, the average being 554 per square mile. In 1940 there were 1,110,818 motor vehicles registered in New Jersey, corresponding to 3.7 people for each motor vehicle.

There are about 28,000 miles of highways within New Jersey, including 1,688 miles of State highways; 6,267 miles of County roads; 15,940 miles of Township and Borough roads and 5,000 miles of streets. About 19,000 miles of the highways are in rural areas.

PROPOSED FEDERAL AID SECONDARY SYSTEM

County Apportionment

In the State of New Jersey there is approximately 19,000 miles of rural roads. The outlines of the proposed Federal Aid Secondary System submitted herewith covers about 1900 miles of highways, the greater part of which are rural roads.

Various elements have been suggested by the Public Roads Administration, which may properly be taken into account in apportioning this mileage to the several counties, and after careful consideration, from these the following have been selected as being those most suitable for and consistent with the conditions as prevailing in the State of New Jersey.

(1) The rural population in each county
(2) The vehicle-mileage on rural roads in each county, exclusive of non-local travel
(3) The number of farms in each county and (in certain counties only) the number of establishments engaged in the recreation industry.

The vehicle-mileage exclusive of non-local traffic (item (2) above) has been determined as follows:

Unless distorted by excessive non-local traffic, the figure obtained by dividing the number of people living in the rural areas of each county into the number of vehicle-miles traveled daily on the rural roads in the county represents the average daily number of miles each person in the rural districts of each county travels on its rural roads, plus a normal amount of non-local traffic which will be found on any road in the State. These figures are shown in Table No. 1.

TABLE NO. 1

LOCAL VEHICLE MILEAGE

County	Rural Pop.		Rural	Miles	Local Veh.-Miles	
	Number	Pct.	Veh.-Miles	Per Person	Number	Pct.
Atl.	23,646	3.09	183,134	7.7	183,100	3.86
Bergen	42,451	5.55	459,275	10.8	382,100	8.06
Burl.	74,016	9.67	348,374	4.7	348,400	7.34
Camden	51,204	6.69	165,110	3.2	165,100	3.48
Cape May	16,514	2.16	99,288	6.0	99,300	2.09
Cumb.	34,472	4.50	230,488	6.7	230,500	4.86
Essex	17,166	2.24	248,162	14.5	154,500	3.26
Glou.	42,885	5.60	296,904	6.9	296,900	6.26
Hudson	2,273	0.30	52,165	22.9	20,500	0.43
Hunt.	29,702	3.88	141,745	4.7	141,700	3.00
Mercer	61,416	8.02	179,059	2.9	179,100	3.78
Midd.	43,210	5.65	355,282	8.2	355,300	7.49
Mon.	77,283	10.10	476,544	6.2	476,500	10.04
Morris	69,681	9.10	516,179	7.4	516,200	10.88
Ocean	37,706	4.93	217,762	5.8	217,800	4.59
Passaic	15,714	2.05	232,310	14.8	141,400	2.98
Salem	27,168	3.55	211,081	7.7	211,100	4.45
Som.	33,159	4.33	245,128	7.4	245,100	5.17
Sussex	20,090	2.62	167,180	8.3	167,200	3.52
Union	21,701	2.84	106,764	4.9	106,800	2.25
Warren	23,935	3.13	104,838	4.4	104,800	2.21
TOTAL	765,392	100.00	5,036,772	7.9	4,743,400	100.00

An inspection of these figures shows that in 17 of the 21 counties the average traveling distance per person on local rural roads lies between 2.9 and 8.3 miles, and that it varies quite uniformly between these limits. There is then a fairly large jump to 10.8 miles in Bergen County and even larger jumps to 14.5, 14.8 and 22.9 miles in the counties of Essex, Passaic and Hudson, respectively. All of these four counties are predominantly urban. The conclusion that may be drawn from the above is that normal local rural mileage may be as high as about 9, and that anything above can be ascribed to non-local travel. In order to exclude non-local travel in above mentioned four counties, therefore, their local rural vehicle-mileage is taken to be 9 times their respective rural population, whereas the observed rural vehicle-mileage is used for the other 17 counties; as shown in Table No. 1.

In certain parts (item 3 above) of the counties of Atlantic, Cape May, Ocean and Sussex, all of which are heavily visited by non-local people for recreational purposes, a considerable percentage of the rural population is depending for its livelihood on the recreation industry. These parts are mostly in places outside of the farming districts, so that they cannot be expected to be provided with needed road facilities by virtue of the proximity to farms, as is normally the case in other counties. For this reason additional provision must be made to take care of this condition. As there are no data directly available to determine the exact magnitude of the recreation industry, this condition has been recognized by assuming that in each of these four counties there are 500 establishments located on rural roads the principal livelihood of which is the recreation industry, and that these together with the number of farms in each of these counties represent one of the basic elements for proportioning the mileage of the secondary system. In all the other counties this element includes only the number of farms as shown in Table No. 2.

TABLE NO. 2

FARMS AND RECREATION INDUSTRY

County	Farms	Recreation Industry	Farms and Recr. Ind.	Percent
Atlantic	1,618	500	2,118	7.61
Bergen	779		779	2.80
Burlington	1,847		1,847	6.63
Camden	759		759	2.73
Cape May	418	500	918	3.30
Cumberland	2,750		2,750	9.88
Essex	211		211	0.76
Gloucester	1,775		1,775	6.38
Hudson	84		84	0.30
Hunterdon	2,431		2,431	8.73
Mercer	1,135		1,135	4.08
Middlesex	1,163		1,163	4.18
Monmouth	2,560		2,560	9.20
Morris	1,179		1,179	4.23
Ocean	875	500	1,375	4.94
Passaic	379		379	1.36
Salem	1,547		1,547	5.56
Somerset	1,319		1,319	4.74
Sussex	1,273	500	1,773	6.37
Union	212		212	0.76
Warren	1,521		1,521	5.46
TOTAL	25,835	2,000	27,835	100.00

The final proportioning of the Federal Aid Secondary System mileage to be allotted to each county is made by adding the percentages of the three basic elements (rural population, rural local vehicle miles, and number of farms and recreation industries) and dividing the sums by 3. These percentages are shown in Table No. 3, which shows also the computed as well as the selected mileage for each county.

TABLE NO. 3

COUNTY PERCENTAGES

County	Rural Pop. Pct.	Local Veh.-Miles Pct.	Farms & Rec. Pct.	Total Pct.	Computed Miles	Selected Miles
Atl.	3.09	3.86	7.61	4.86	92.3	87.5
Bergen	5.55	8.06	2.80	5.47	103.9	101.3
Burl.	9.67	7.34	6.63	7.88	149.7	147.8
Camden	6.69	3.48	2.73	4.30	81.7	81.7
CapeMay	2.16	2.09	3.30	2.52	47.9	55.4
Cumb.	4.50	4.86	9.88	6.41	121.8	121.8
Essex	2.24	3.26	0.76	2.09	39.7	41.6
Glou.	5.60	6.26	6.38	6.08	115.6	119.7
Hudson	0.30	0.43	0.30	0.34	6.5	7.2
Hunt.	3.88	3.00	8.73	5.20	98.8	89.0
Mercer	8.02	3.78	4.08	5.29	100.6	101.7
Midd.	5.65	7.49	4.18	5.77	109.6	115.8
Mon.	10.10	10.04	9.20	9.78	185.8	166.1
Morris	9.10	10.88	4.23	8.07	153.3	146.3
Ocean	4.93	4.59	4.94	4.82	91.6	95.4
Passaic	2.05	2.98	1.36	2.13	40.5	39.6
Salem	3.55	4.45	5.56	4.52	85.9	84.6
Som.	4.33	5.17	4.74	4.75	90.2	97.7
Sussex	2.62	3.52	6.37	4.17	79.2	75.5
Union	2.84	2.25	0.76	1.95	37.0	37.5
Warren	3.13	2.21	5.46	3.60	68.4	69.8
TOTAL	100.00	100.00	100.00	100.00	1900.0	1883.0

Selection of Routes

As it is primarily intended that the Federal Aid Secondary System shall cover roads secondary in importance only to those on the Federal Aid System, the selection of the routes for the secondary system has been governed principally by the daily traffic volume as determined by the Planning Survey a few years ago.

Other factors, however, have been considered also. These include mail and school bus routes, but these are so widespread in New Jersey that they generally coincide with the more traveled routes. Routes which previously have received Federal Aid were considered and have been included when warranted. Service rendered by the highways was weighed and taken into account in the selection of the routes.

After a preliminary selection, based on above and other pertinent factors had been completed, the routes were plotted on a State map and reviewed. Where two or more routes paralleled each other, that furnishing the maximum service was retained and others omitted if conditions so warranted. If the primary selection showed several routes bunched in one part of a county and other parts were barren of routes, an adjustment was made to remedy this condition. Where routes were disconnected, the gaps were filled in when it appeared to advantage of traffic, and routes were made continuous across county boundaries, as well as to connection with routes of other States where the need of this was indicated. For these reasons portions of some of the proposed secondary routes extend over roads on which the present traffic is fairly light, and some routes have been included which now carry little traffic on account of road conditions but which, in the opinion of the County officials and the State Highway Department, will have a material increase in traffic when improved and will be of benefit to the county and the State. Included among these are the following:

(1) The portion of F. A. S. Rt. 4 from Cape May Court House to South Dennis, Cape May County. This road is at present unimproved. Traffic counts indicate that there is an average daily traffic of about 600 vehicles between these points over other roads, and during the summer season this traffic is quite heavy to the shore points. The travel distance will be shortened 2 miles when the proposed route is improved.

(2) F. A. S. Rt. 221 from Dennisville to Tuckahoe, Cape May County. The present road is unimproved and for that reason carries but little traffic. However, it is the opinion that this route will carry a material volume of traffic and reduce travel distances when improved, and it is evident that it will complement an otherwise well integrated system of Federal Aid and Federal Aid Secondary highways in this area.

(3) The portion of F. A. S. Rt. 81 from Cedar Bridge to Whitings, Ocean County, is unimproved and for that reason carries little traffic at the present time. This route is important for the development of this part of the county and represents, in fact, the only proposed route in this part of the county as well as in the adjacent county of Burlington. Together with other proposed routes it will form a road integrating the secondary system.

(4) F. A. S. Rt. 82 from Lakehurst westerly to proposed Rt. 81, Ocean County. This road is adjacent to the Naval Air Station at Lakehurst and to Fort Dix and will form a useful link of the Federal Aid systems within an area otherwise scarcely furnished

with public roads on account of the federal occupation of this territory.

During the period of selection of the Federal Aid Secondary routes, frequent consultations have been had with County freeholders, engineers and other officials and adjustments have been made to conform to their views whenever consistent with fundamental requirements of the laws relating thereto and with the rulings of the Public Roads Administration; and valuable assistance has been given freely to the State Highway Department during the progress of this work by the representatives of the Public Roads Administration.

Sigvald Johannesson

Sigvald Johannesson
Chief, Highway Planning Bureau

September 24, 1945.

ANNUAL REPORT

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DEPARTMENT

[illegible]
[illegible]

ANNUAL REPORT

OF THE

PROJECTS DIVISION

NEW JERSEY STATE HIGHWAY
DEPARTMENT

FOR THE YEAR

1945

State of New Jersey
STATE HIGHWAY DEPARTMENT
SPENCER MILLER, JR., COMMISSIONER
TRENTON 1

April 25, 1946

Honorable Spencer Miller, Jr.,
State Highway Commissioner,
Trenton, New Jersey.

Dear Sir:

There is submitted herewith the Annual Report of the Projects Division for the year 1945.

In addition to the Annual Report there is also submitted herewith the report on Sussex County Rural Roads 1946.

Respectfully Submitted,

E. E. Reed

E. E. Reed,
Supervisor of State Aid Projects.

EER:RG

PROJECTS DIVISION

STATUS OF EMPLOYEES IN ARMED FORCES AS OF DECEMBER 31st, 1945

Name	Branch of Service	Status
Aiello, Joseph J.	Army	Returned October 5, 1945
Barrett, John	Army	Returned October 1, 1945
Chumar, Clarence A.	Navy	Returned November 13, 1945
Costello, Carl A.	Army	On Milieary Leave
Davis, Paul F.	Army	Returned July 1, 1945
Deacon, Frank J.	Army	On Military Leave
Faxon, Alfred A., Jr.	Army	Returned October 5, 1945
Forster, Guido F.	Navy	Returned December 15, 1945
Hall, Walter E.	Navy	Returned September 24, 1945
Hann, Samuel G.	Navy	Returned December 5, 1945
Higgins, Frank W.	Army	Returned October 26, 1945
Krauss, George A.	Army	On Military Leave
LaBar, Thomas B. H.	Army	On Military Leave
McGarry, John F.	Army	Returned December 18, 1945
Mills, Paul A.	Merchant Marine	On Military Leave
Packer, George S.	Army	Returned May 1, 1945
Paul, William V.	Army	On Military Leave
Sterner, Sydney	Navy	Returned November 16, 1945
Sustick, Alzem N.	Army	On Military Leave
Thomas, John W.	Army	On Military Leave
Topping, Ernest G.	Navy	On Military Leave

State of New Jersey
STATE HIGHWAY DEPARTMENT
SPENCER MILLER, JR., COMMISSIONER
TRENTON 1

GDC/RG

April 1, 1946

MEMORANDUM TO MR. REED:

Herewith is presented the yearly report of the Projects Division showing the status of Motor Vehicle Aid and Township & Borough Aid (Construction, Dirt Road and Maintenance) funds for the year ending December 31st, 1945.

MOTOR VEHICLE AID

During the year 1945 six (6) projects were completed involving the construction of 5.60 miles of surface pavement at an estimated final cost of $53,968.34; .326 mile of creosoted timber bulkhead at a final cost of $28,896.00, and .31 mile of concrete curbs and gutters at a final cost of $11,232.50. Plans and specifications were approved and contracts awarded late in the year for the construction of 2.06 miles of Type "A" surface at a contract amount of $40,218.30 and .786 mile of reinforced concrete was proposed for construction at an estimated cost of $55,576.30, but work was not started on these two projects as of December 31st, 1945. One other project involving the construction of 1.88 miles of gravel surface at a contract price of $11,191.55 was under construction as of December 31st, 1945.

A tabulation of the above projects follows as does a sheet showing the 1945 apportionment of the Motor Vehicle Aid Funds to the counties and for comparison purposes a sheet has been included showing this information in connection with the 1946 funds. There is also included sheets showing the County Expenditures for Roads and Bridges and Bonds and Interest for same for the years 1944 and 1945.

TOWNSHIP AND BOROUGH AID (CONSTRUCTION FUNDS)

Up until May 1945, new construction work with these funds was still prohibited if the project cost in excess of $10,000. With the close of the War in the European theatre in May the above restriction was lifted and several miles of roads of various types was completed or under construction by the end of the year.

During 1945 work was completed on 99.898 miles of municipal roads at a final construction cost of $883,257.78 of which the State's share was $771,867.35 or approximately 87%. Of this mileage 67.592 was actual surface construction; 25.534 miles was bituminous surface treatment work; 5.169 miles was for reconstructing gravel surface on roads previously constructed with State Aid and 1.603 miles was grading, drainage, storm damage repairs and bituminous soil stabilization work.

The total amount of Township and Borough Aid construction funds paid by the State for work completed during the year was $800,021.40, of which $28,154.05 represented the State's share of engineering and is less than 4% of the total funds paid.

During 1945 work was begun on 145 projects and of this number 121 or 83% were completed and 24 were under construction as of December 31st, 1945.

GDC:RG

April 1, 1946

MEMORANDUM TO MR. REED (continued)

In addition to the projects completed or under construction there was, at the close of the year, 698 projects on which funds have been allotted but actual construction has not yet been started. These funds are still to the credit of the municipalities having accumulated over the past four years because of War restrictions on road work. The total cost of constructing these projects is estimated at $5,830,857.54 of which the State's share would be $5,247,772.85. Much of this State money is still in the Special State Aid Road Fund Account in the State Treasurer's office, to which it was certified in accordance with Chapter 45, P. L. 1943, the amount at the close of the year being $3,830,288.38.

Another 269 projects received State grants of aid from the 1946 funds and a list of these can be seen in this report.

The following tabulation shows a comparison by types of the mileage completed in 1945 and 1944:

	1945					1944				
Type	Twps.	Boros.	Towns	Vils.	Cities:	Twps.	Boros.	Towns	Vils.	Cities
Gravel	14.217	5.824	1.861	-	1.220	16.540	1.125	-	-	-
Gravel BST	6.192	1.945	-	-	-	.601	-	-	-	-
Gravel Ca.Cl2	4.948	.850	-	-	-	.830	.900	-	-	-
Gravel M.I.P.	.729	.226	-	-	-	.820	.720	-	-	-
B.S.T.	22.735	1.579	-	-	1.220	35.776	5.044	-	-	-
M.I.P.-B.S.T.	14.226	5.638	-	-	.650	13.790	1.397	-	-	-
Bit.Pen.Mac.	1.338	2.875	.230	-	-	2.089	1.279	.526	-	-
Type "A" or "T"	1.961	1.628	-	-	-	.800	1.416	-	-	-
Bit. Concrete	.665	.565	.077	-	3.238	.482	.480	-	-	1.232
Sheet Asphalt	.616	.087	1.300	-	-	-	-	-	-	-
Plain Concrete	.075	-	-	-	-	.094	-	-	-	-
Grading & Drainage	.275	.130	.198	-	-	-	.388	-	-	-
Bit.Soil Stab.	.310	-	-	-	-	-	-	-	-	-
Storm Damage Repairs	.270	-	-	-	-	-	-	-	-	-
Reinf. Concrete	-	-	-	-	-	-	.332	-	-	-
	68.557	21.347	3.666	- -	6.328	71.822	13.081	.526	-	1.232

There also follows a tabulation showing the mileage of municipal roads which has been constructed with Township and Borough Aid Funds each year since 1920. The original Herrick Act, providing for the construction of these rural roads, was passed in 1916 but no mileage figures are available for the years before 1921.

GDC/RG

April 1, 1946

MEMORANDUM TO MR. REED (continued)

Year	Mileage	Year	Mileage	Year	Mileage
1921	149.702	1930	251.830	1939	240.930
1922	197.000	1931	269.900	1940	195.320
1923	85.380	1932	167.860	1941	234.720
1924	99.220	1933	192.490	1942	90.680 *
1925	167.687	1934	216.770	1943	61.380
1926	170.000	1935	172.110	1944	30.143
1927	114.480	1936	188.250	1945	67.592
1928	133.100	1937	252.850	Grand Total	4,186.334
1929	190.840	1938	246.100		

* Corrected figure due to mileage of one project completed in 1942 having been omitted from 1942 report.

TOWNSHIP AND BOROUGH AID (DIRT ROAD FUND)

In accordance with Title 27, Chapter 15, of the Revised Statutes, $50,000 of the $125,000 of Township and Borough Aid Construction funds available in each County may be used for the maintenance and repair of unimproved municipal roads if applied for, to be used for this purpose, by the Boards of Freeholders. As a part of this report there is a sheet captioned "Township and Borough Aid Applications Submitted for 1946 Funds," which sheet includes a column showing the requests for 1946 Dirt Road Funds. The total amount requested is $950,000.00, the same amount as was requested and paid to the counties from the 1945 funds.

TOWNSHIP AND BOROUGH AID (MAINTENANCE FUND)

Title 27, Chapter 15, of the Revised Statutes, also provides annually $525,000.00, State's share, of Township and Borough Aid Maintenance Funds, which is used for the maintenance and repair of municipal roads previously built with the Township and Borough Aid Construction Funds. The amount of this Maintenance fund available to each county is $25,000. The counties submitted to the State Highway Commissioner for 1945 funds, schedules totaling an estimated cost of $716,883.30, of which the State's share was $641,626.31. The amount obligated from the 1945 funds was $453,150.00 and the difference or $188,476.31 came from unused funds of previous years.

These funds were for the maintenance of an estimated 732 miles of roads and represented an average cost of approximately $980.00 per mile.

Contained in this report is a sheet showing the breakdown, by counties, of these maintenance funds.

Respectfully submitted,

Assistant Supervisor of State Aid Projects.

MOTOR VEHICLE AID

STATUS OF CONTRACT OR FORCE ACCOUNT PROJECTS, JANUARY 1, 1945 to DECEMBER 31, 1945

Name of Road or Bridge	Type Surface	Type Found.	Length	Method of Construction	State's Allotment	(1)Contract Amt. (2)Final Cost (3)Estimated Cost	Status of Work
		BURLINGTON COUNTY					
Beverly-Burlington Rd.	Type "A"	Pen.Mac.	1.000	FA	$ 14,000.00	$ 9,037.91 (3)	Completed
Fieldsboro-Bordentown Rd.	Type "A"	Old Conc.	1.000	FA	12,000.00	12,406.77 (3)	Completed
Vincentown-Buddtown Rd.	Gravel BST	Old Stone Rd.	2.800	FA	12,240.00	11,281.53 (3)	Completed
		CAPE MAY COUNTY					
Beach Av. Bulkhead	Creosoted Timber Bulkhead	-	.326	Contract	$23,396.00	$28,896.00 (2)	Completed
		CUMBERLAND COUNTY					
Parsonage Rd.	Conc. Curbs & Gutters	-	.31	Contract	$11,232.50	$11,232.50 (2)	Completed
Port Norris-Mauricetown Rd. (over Mauricetown Causeway)	Gravel	Earth Fill	.80	Contract	21,242.13	21,242.13 (2)	Completed
		HUNTERDON COUNTY					
Cherryville-Quakertown Rd.	Type "A"	Mod.Pen.Mac.	2.06	Contract	$17,533.29	$40,218.30 (1)	Not Started
		OCEAN COUNTY					
Lakewood-New Egypt Rd.	Gravel	Earth	1.88	Contract	$11,200.00	$11,191.55 (1)	In Progress
		WARREN COUNTY					
Alpha By-Pass	Reinf.Conc.		.786	Contract	$20,000.00	$55,576.60 (3)	Not Started
		Grand Totals	10.962		$142,843.92	$201,083.29	

NEW JERSEY STATE HIGHWAY DEPARTMENT
Projects Division

1946 Apportionment

October 1, 1945

1946

APPORTIONMENT OF MOTOR VEHICLE AID FUND TO COUNTIES

New Jersey Population by Counties-1940 Census

County Areas - - - 1930 Revision

County	1946 County Road Mileage	% of Total Mileage	Population 1940	% of Total Population	County Area in Square Miles	% of Total Area	Average % of County Road Mileage, Area, & Population	Apportionment of $6,000,000.00	Apportionment of $ 735,000.00	TOTAL $ 6,000,000.00 735,000.00 $ 6,735,000.00
Atlantic	325.990	5.148	124,066	2.982	610.310	7.421	5.183	310,980.00	$ 35,000.00	$ 345,980.00
Bergen	471.966	7.453	409,646	9.847	246.170	2.993	6.764	405,840.00	35,000.00	440,840.00
Burlington	459.340	7.254	97,013	2.332	827.120	10.057	6.547	392,820.00	35,000.00	427,820.00
Camden	323.770	5.113	255,727	6.147	226.335	2.752	4.671	280,260.00	35,000.00	315,260.00
Cape May	171.780	2.713	28,919	0.695	450.910	5.483	2.964	177,840.00	35,000.00	212,840.00
Cumberland	570.530	9.010	73,184	1.759	674.330	8.199	6.322	379,320.00	35,000.00	414,320.00
Essex	189.110	2.987	837,340	20.128	129.720	1.577	8.230	493,800.00	35,000.00	528,800.00
Gloucester	381.230	6.021	72,219	1.736	340.625	4.142	3.966	237,960.00	35,000.00	272,960.00
Hudson	126.008	1.990	652,040	15.674	60.480	0.735	6.133	367,980.00	35,000.00	402,980.00
Hunterdon	211.710	3.343	36,766	0.884	439.120	5.339	3.189	191,340.00	35,000.00	226,340.00
Mercer	157.959	2.495	197,318	4.743	227.900	2.771	3.336	200,160.00	35,000.00	235,160.00
Middlesex	310.261	4.900	217,077	5.218	324.440	3.945	4.688	281,280.00	35,000.00	316,280.00
Monmouth	331.250	5.231	161,238	3.876	534.040	6.493	5.200	312,000.00	35,000.00	347,000.00
Morris	267.710	4.228	125,732	3.022	480.190	5.839	4.363	261,780.00	35,000.00	296,780.00
Ocean	561.630	8.870	37,706	0.906	754.810	9.178	6.318	379,080.00	35,000.00	414,080.00
Passaic	229.860	3.630	309,353	7.436	198.650	2.415	4.494	269,640.00	35,000.00	304,640.00
Salem	355.944	5.621	42,274	1.016	389.370	4.734	3.793	227,580.00	35,000.00	262,580.00
Somerset	205.060	3.238	74,390	1.788	305.020	3.709	2.912	174,720.00	35,000.00	209,720.00
Sussex	281.000	4.438	29,632	0.712	535.310	6.509	3.886	233,160.00	35,000.00	268,160.00
Union	148.567	2.346	328,344	7.893	104.940	1.276	3.838	230,280.00	35,000.00	265,280.00
Warren	251.460	3.971	50,181	1.206	364.650	4.433	3.203	192,180.00	35,000.00	227,180.00
TOTALS	6,332.135	100.000	4,160,165	100.000	8,224.440	100.000	100.000	$ 6,000,000.00	$ 735,000.00	$ 6,735,000.00

NEW JERSEY STATE HIGHWAY DEPARTMENT
Projects Division

1945 Apportionment

October 2, 1944

1945

APPORTIONMENT OF MOTOR VEHICLE AID FUND TO COUNTIES

New Jersey Population by Counties-1940 Census

County Areas - - - 1930 Revision

County	1945 County Road Mileage	% of Total Mileage	Population 1940	% of Total Population	County Area in Square Miles	% of Total Area	Average % of County Road Mileage, Area, & Population	Apportionment of $6,000,000.00	Apportionment of $ 735,000.00	TOTAL $6,000,000.00 735,000.00 6,735,000.00
Atlantic	332.390	5.266	124,066	2.982	610.310	7.421	5.223	$ 313,380.00	$ 35,000.00	$ 348,380.00
Bergen	471.966	7.477	409,646	9.847	246.170	2.993	6.772	406,320.00	35,000.00	441,320.00
Burlington	459.340	7.277	97,013	2.332	827.120	10.057	6.555	393,300.00	35,000.00	428,300.00
Camden	313.320	4.964	255,727	6.147	226.335	2.752	4.621	277,260.00	35,000.00	312,260.00
Cape May	171.780	2.721	28,919	0.695	450.910	5.483	2.966	177,960.00	35,000.00	212,960.00
Cumberland	570.530	9.038	73,184	1.759	674.330	8.199	6.332	379,920.00	35,000.00	414,920.00
Essex	189.110	2.996	837,340	20.128	129.720	1.577	8.234	494,040.00	35,000.00	529,040.00
Gloucester	381.230	6.039	72,219	1.736	340.625	4.142	3.972	238,320.00	35,000.00	273,320.00
Hudson	101.908	1.614	652,040	15.674	60.480	0.735	6.008	360,480.00	35,000.00	395,480.00
Hunterdon	212.850	3.372	36,766	0.884	439.120	5.339	3.198	191,880.00	35,000.00	226,880.00
Mercer	168.059	2.662	197,318	4.743	227.900	2.771	3.392	203,520.00	35,000.00	238,520.00
Middlesex	307.024	4.864	217,077	5.218	324.440	3.945	4.676	280,560.00	35,000.00	315,560.00
Monmouth	328.000	5.196	161,238	3.876	534.040	6.493	5.188	311,280.00	35,000.00	346,280.00
Morris	271.010	4.293	125,732	3.022	480.190	5.839	4.385	263,100.00	35,000.00	298,100.00
Ocean	551.530	8.737	37,706	0.906	754.810	9.178	6.274	376,440.00	35,000.00	411,440.00
Passaic	230.150	3.646	309,353	7.436	198.650	2.415	4.499	269,940.00	35,000.00	304,940.00
Salem	355.944	5.639	42,274	1.016	389.370	4.734	3.796	227,760.00	35,000.00	262,760.00
Somerset	205.060	3.249	74,390	1.788	305.020	3.709	2.915	174,900.00	35,000.00	209,900.00
Sussex	292.100	4.628	29,632	0.712	535.310	6.509	3.950	237,000.00	35,000.00	272,000.00
Union	147.567	2.338	328,344	7.893	104.940	1.276	3.836	230,160.00	35,000.00	265,160.00
Warren	251.460	3.984	50,181	1.206	364.650	4.433	3.208	192,480.00	35,000.00	227,480.00
TOTALS	6,312.328	100.000	4,160,165	100.000	8,224.440	100.000	100.000	$6,000,000.00	$735,000.00	$6,735,000.00

NEW JERSEY COUNTY EXPENDITURES (Exclusive of State Funds)
For Roads and Bridges for year 1945 per questionnaire

County	Maintenance and Repairs		Construction & Reconstruction		Bonds - Principal and Interest		Total Not including Bonds and Interest	Total
	Roads	Bridges	Roads	Bridges	Roads	Bridges		
Atlantic	B- 44,221.61	-0-	-0-	-0-	A- 83,007.50	-0-	44,221.61	127,229.11
Bergen	251,106.82	101,750.00	-0-	171,610.01	212,565.25	212,565.25	524,466.83	949,597.33
Burlington	53,000.00	-0-	-0-	-0-	-0-	60,100.00	53,000.00	113,100.00
Camden	87,242.56	8,470.28	-0-	-0-	3,348.18	-0-	95,712.84	99,061.02
Cape May	B- 4,898.14	-0-	-0-	-0-	A- 87,481.25	-0-	4,898.14	92,379.39
Cumberland	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Essex	B- 120,470.47	-0-	-0-	-0-	A- 372,529.72	-0-	120,470.47	493,000.19
Gloucester	2,484.19	2,106.00	-0-	-0-	-0-	-0-	4,590.19	4,590.19
Hudson	1,403,442.63	88,907.85	194,988.72	49,969.47	A- 60,869.82	-0-	1,737,308.67	1,798,178.49
Hunterdon	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Mercer	-0-	53,800.00	80,000.00	10,000.00	310,704.00	133,156.00	143,800.00	587,660.00
Middlesex	132,182.83	32,000.00	163,523.86	3,940.77	118,370.00	62,533.76	331,647.46	512,551.22
Monmouth	129,668.83	130,623.04	192,278.85	154,151.58	138,180.00	104,040.00	606,722.30	848,942.30
Morris	82,791.13	19,000.00	-0-	-0-	-0-	-0-	101,791.13	101,791.13
Ocean	74,043.73	37,171.68	-0-	-0-	-0-	-0-	111,215.41	111,215.41
Passaic	116,400.00	136,600.00	60,000.00	-0-	C- 114,692.50	-0-	313,000.00	427,692.50
Salem	B- 9,909.91	-0-	-0-	-0-	-0-	-0-	9,909.91	9,909.91
Somerset	B- 25,000.00	-0-	-0-	-0-	A- 31,886.25	-0-	25,000.00	56,886.25
Sussex	32,287.97	535.97	2,193.31	-0-	A- 5,923.34	-0-	35,017.25	40,940.59
Union	B- 255,328.41	-0-	-0-	-0-	A- 312,150.18	-0-	255,328.41	567,478.59
Warren	32,437.14	5,998.36	-0-	-0-	-0-	-0-	38,435.50	38,435.50
TOTALS	2,856,916.37	616,963.18	692,984.74	389,671.83	1,851,707.99	572,395.01	4,556,536.12	6,980,639.12

A- Bridge Bonds combined with Road Bonds.
B- Roads and Bridges combined.
C- Interest only.

2-14-46/RHM

NEW JERSEY

County Appropriations (Exclusive of State Funds)
For Roads and Bridges for year 1944, per Questionnaire

County	Maintenance & Repairs		Construction & Reconstruction		Bonds-Principal & Interest		Total Not Including Bonds & Interest	Total
	Roads	Bridges	Roads	Bridges	Roads	Bridges		
Atlantic	-0-	-0-	-0-	-0-	B-88,977.50	-0-	-0-	88,977.50
Bergen	180,210.00	62,175.00	-0-	-0-	315,498.00	315,498.00	242,385.00	873,381.00
Burlington	59,609.55	10,656.52	-0-	56,208.16	10,900.00	16,100.00	126,474.23	153,474.23
Camden	62,498.13	8,051.93	1,300.00	6,081.31	261.03	-0-	77,931.37	78,192.40
Cape May	A-28,628.88	55.33	-0-	-0-	B-82,767.75	-0-	28,684.21	111,451.96
Cumberland	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Essex	C-119,930.07	-0-	-0-	-0-	B-382,529.72	-0-	119,930.07	502,459.79
Gloucester	5,196.60	2,313.77	-0-	-0-	-0-	-0-	7,510.37	7,510.37
Hudson	1,326,159.71	86,369.98	-0-	-0-	B-87,613.15	-0-	1,412,529.69	1,500,142.84
Hunterdon	-0-	-0-	-0-	-0-	86,147.50	-0-	-0-	86,147.50
Mercer	-0-	55,100.00	-0-	-0-	357,993.00	150,577.00	55,100.00	563,670.00
Middlesex	148,045.18	35,199.05	185,968.92	2,904.23	235,160.00	64,483.76	372,117.38	671,761.14
Monmouth	81,496.80	203,912.20	100,000.00	99,647.84	187,282.50	90,972.50	485,056.84	763,311.84
Morris	62,215.95	12,000.00	-0-	-0-	-0-	-0-	74,215.95	74,215.95
Ocean	88,755.29	38,875.00	-0-	-0-	-0-	-0-	127,630.29	127,630.29
Passaic	170,090.70	84,845.30	18,000.00	-0-	464,150.00	-0-	272,936.00	737,086.00
Salem	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Somerset	17,000.00	35,000.00	-0-	-0-	46,848.75	-0-	52,000.00	98,848.75
Sussex	C-17,887.80	-0-	-0-	-0-	B-9,205.99	-0-	17,887.80	27,093.79
Union	C-111,977.99	-0-	-0-	-0-	B-354,166.49	-0-	111,977.99	466,144.48
Warren	1,332.50	-0-	-0-	-0-	-0-	-0-	1,332.50	1,332.50
Totals:	$2,481,035.15	$634,554.08	$305,268.92	$164,841.54	$2,709,501.38	$637,631.26	$3,585,699.69	$6,932,832.33

A- Includes $27,956.98 Emergency Storm Damage.
B- Bridge Bonds combined with Road Bonds.
C-Roads and Bridges combined.

RHM/3-15-45

TOWNSHIP & BOROUGH AID ROADS COMPLETED JANUARY 1, 1945 to DECEMBER 31, 1945

				Paved	Method of	State's Share of		Final Cost	Total Cost
Municipality	Name of Road	Type	Mileage	Width	Construction	Constr.	Engr.	of Constr.	of Project
				ATLANTIC COUNTY					
Buena Vista Twp.	Vine Rd.,Sec.#2	Gravel	.651	26'	FA	$ 2,430.00	-	$ 2,772.80	$ 2,772.80
Buena Vista Twp.	Vine Rd.,Sec.#1	Gravel	1.136	26'	Contract	4,431.13	$ 443.12	4,923.48	5,415.83
Galloway Twp.	Belmar & Odessa Avs.	BST	1.385	20'	Contract	2,560.19	-	2,844.65	2,844.65
Hamilton Twp.	Estelle Av.	BST	1.666	20'	Contract	3,000.00	-	3,426.89	3,426.89
Hamilton Twp.	Malaga Rd.,Secs.#2&3	Gravel,cacl.	1.310	26')	Contract	7,606.12	655.34	8,451.24	9,179.40
Hamilton Twp.	Malaga Rd.,Secs.1,2,3	BST	.450	20')					
Hammonton Town	15th St.,Sec.#1&2,& 2nd Rd.	Gravel	1.861	26'	Contract	5,519.68	669.96	6,132.97	6,877.37
Mullica Twp.	Elwood-Weekstown Rd., Sec.#2	Gravel	1.022	26'	Contract	5,036.40	503.64	5,596.00	6,155.60
Somers Point City	Groveland Av.	FA-BC-1	.211	20'	Contract	3,956.85	-	4,396.50	4,396.50
Somers Point City	Bethel Rd.	Gravel	1.220	26'	FA	3,420.00	-	4,794.85	4,794.85
Somers Point City	Bethel Rd. (Surf.Tr.)	BST	1.220	20'	Contract	3,273.94	-	3,637.71	3,637.71
		Totals	12.132			$41,234.31	$2,272.06	$46,977.09	$49,501.60
				BERGEN COUNTY					
Cliffside Park Boro.	Lafayette Av.,Sec.#2	Bit.Pen.Mac.	.148	30'	Contract	$ 6,620.92	$ 133.20	$ 7,356.58	$ 8,113.76
Cresskill Boro.	Weigand Place	Bit.Pen.Mac.	.126	20'	Contract	2,966.13	-	3,295.70	3,295.70
Englewood Cliffs Boro.	Pershing Rd.	Bit.Pen.Mac.	.420	18'	Contract	5,189.93	378.00	5,766.59	6,186.59
Maywood Boro.	Spring Valley Rd., Sec.#2	Bit.Pen.Mac.	.696	20'	Contract	10,909.55	626.40	12,121.72	12,817.72
Midland Park Boro.	Franklin Av.	Bit.Pen.Mac.	.303	20-27'	Contract	6,747.23	-	7,496.92	7,496.92
Moonachie Boro.	Henry St.	Bit.Pen.Mac.	.261	16'	Contract	5,260.99	139.01	5,845.54	6,106.54
S. Hackensack Twp.	Chestnut St.	Bit.Pen.Mac.	.341	20'	Contract	5,490.23	306.90	6,100.25	6,441.25
Tenafly Boro.	Hudson Av.	Bit.Pen.Mac.	.112	30'	Contract	4,280.04	-	4,755.60	4,755.60
		Totals	2.407			$47,465.02	$1,583.51	$52,738.90	$55,214.08
				BURLINGTON COUNTY					
Chester Twp.	Center Av.	Drainage	.180	30'	Contract	$ 6,725.30	$ 162.00	$ 7,472.55	$ 7,652.55
Cinnaminson Twp.	Lenola Rd.	Gravel	.930	30'	Contract	7,000.51	700.05	7,778.35	8,556.18
Fieldsboro Boro.	Washington St.	Gravel	.466	30'	Contract	3,134.20	313.43	3,482.45	3,830.70
Lumberton Twp.	Masonville Rd.	Gravel,BST	.340	30'	Contract	4,556.27	306.00	5,062.52	5,402.52
Medford Twp.	Masonville Rd.,Sec.#2	Gravel,BST	.492	30'	Contract	3,710.64	381.15	4,234.85	4,658.34

(continued on Sheet #2)

TOWNSHIP & BOROUGH AID ROADS COMPLETED JANUARY 1, 1945 to DECEMBER 31, 1945 (continued, Sheet #2)

Municipality	Name of Road	Type	Mileage	Paved Width	Method of Construction	State's Constr.	Share of Engr.	Final Cost of Constr.	Total Cost of Project
					BURLINGTON COUNTY (continued)				
Medford Lakes Boro.	Tabernacle & McKendemen Rds.	Gravel	.500	26'	Contract	$ 3,803.49	$ 380.35	$ 4,226.10	$ 4,648.71
Mount Laurel Twp.	Elbo Lane, Sec.#2	Gravel, cacl	1.116	26'	Contract	6,420.38	642.04	7,133.75	7,847.13
Pemberton Twp.	New Lisbon Rd.	Gravel, cacl	.413	30'	Contract	4,027.59	-	4,475.10	4,475.10
Tabernacle Twp.	Carranza Monument Rd.	MIP BST	1.500	24'	Contract	6,671.36	270.00	7,412.62	7,712.62
Woodland Twp.	Sooy Pl.-Hedgerhouse Rd., Sec.#2	Gravel	2.557	26'	Contract	9,785.03	-	10,872.25	10,872.25
Wrightstown Boro.	Springfield-Juliustown Rd.	Gravel	.321	26'	Contract	2,963.84	288.90	3,293.15	3,614.15
		Totals	8.815			$58,798.61	$3,443.92	$65,443.69	$69,270.25
					CAMDEN COUNTY				
Pennsauken Twp.	Irving Av.	Pl.Conc.	.075	30'	Contract	$ 6,401.23	-	$ 7,112.48	$ 7,112.48
Pennsauken Twp.	River Rd., Sec.#2	FA-BC-1	.336	30'	Contract	9,000.00	-	10,322.00	10,322.00
Waterford Twp.	Bartram Av. & Cooper Folly Rd.	Gravel	.707	30'	Contract	3,702.17	370.21	4,113.52	4,524.87
Winslow Twp.	Williamstown-Winslow Rd.	BST	2.800	20'	Contract	5,058.05	-	5,620.05	5,620.05
		Totals	3.918			$24,161.45	$ 370.01	$27,168.05	$27,579.40
					CAPE MAY COUNTY				
Avalon Boro.	Second Av.	Gravel	1.700	30'	Contract	$ 8,502.62	-	$ 9,447.35	$ 9,447.35
N. Wildwood City	4th, 9th, various sts.	FA-BC-1	3.027	20'	Contract	55,822.64	$ 817.29	62,025.15	62,933.25
		Totals	4.727			$64,325.26	$ 817.29	$71,472.50	$72,380.60
					CUMBERLAND COUNTY				
Downe Twp.	Cove Rd.	Gravel	.400	26'	FA	$ 1,797.57	-	$ 1,997.30	$ 1,997.30
Downe Twp.	Gandy Rd.	Gravel	.400	26'	FA	1,979.28	-	2,199.20	2,199.20
Downe Twp.	Raybins Beach Rd.	Gravel	.700	26'	FA	4,046.85	-	4,496.50	4,496.50
Downe Twp.	Turkey Pt.Rd., Secs.#1&3	BST	2.050	22'	Contract	4,205.17	-	4,672.41	4,672.41
Fairfield Twp.	Clarks Pond Rd., Sec.#2	Gravel	.650	30'	FA	2,875.72	-	3,195.25	3,195.25
Fairfield Twp.	Clarks Pond Rd., Sec.#2, Shoemaker Rd. & Gum Pt.Rd., Secs.#1&2	BST	2.376	20&22'	Contract	5,019.30	-	5,557.00	5,557.00

(continued on Sheet #3)

TOWNSHIP & BOROUGH AID ROADS COMPLETED JANUARY 1, 1945 to DECEMBER 31, 1945 (continued, Sheet #3)

Municipality	Name of Road	Type	Mileage	Paved Width	Method of Construction	State's Share of Constr.	State's Share of Engr.	Final Cost of Constr.	Total Cost of Project
				CUMBERLAND COUNTY (continued)					
Fairfield Twp.	Shoemaker Rd.	Gravel	.184	26'	FA	$ 2,178.14	-	$ 2,420.16	$ 2,420.16
Greenwich Twp.	Stock Rd., Sec. #1, & Wheaton Island Rd.	BST	2.008	20-22'	Contract	4,021.09	-	4,467.88	4,467.88
Hopewell Twp.	Platt, Valentine, Gilmore, Lakeside, Blew, Koebernick Rds.	BST	3.750	20-22'	Contract	6,360.16	-	7,066.85	7,066.85
Landis Twp.	Park Drive	FA-BC-1	.329	20'	Contract	8,841.53	$ 296.10	9,823.92	10,152.92
Maurice River Twp.	McDonald Av., Sec. #2, & Cannon Range Rd.	BST	1.500	20-22'	Contract	2,862.63	-	3,180.70	3,180.70
Stow Creek Twp.	Frank Davis Rd.	Gravel	.500	26'	FA	2,248.88	-	2,498.75	2,498.75
Upper Deerfield Twp.	Love Lane	Gravel Recons	1.300	26'	FA	3,400.00	-	3,908.20	3,908.20
Vineland Boro.	Gilmore & Harvard Sts.	Gravel, BST	.275	26'	FA	2,215.26	-	2,461.40	2,461.40
Vineland Boro.	N. 7th St.	FA-BC-1	.300	26'	Contract	6,603.75	-	7,337.50	7,337.50
		Totals	16.722			$58,655.33	$ 296.10	$65,283.02	$65,612.02
				ESSEX COUNTY					
Bloomfield Town	Municipal Plaza	FA-BC-2	.077	40'	Contract	$ 3,461.71	-	$ 3,846.35	$ 3,846.35
Maplewood Twp.	Cedar Lane	Bit.Pen.Mac.	.066	30'	Contract	4,273.70	-	4,748.55	4,748.55
Nutley Town	Warren, Adams & Lloyd Sts.	Bit.Pen.Mac.	.230	30'	Contract	9,749.66	-	16,542.03	16,542.03
		Totals	.373			$17,485.07	-	$25,136.93	$25,136.93
				GLOUCESTER COUNTY					
Clayton Boro.	East Av.	Gravel, cacl.	.850	30'	FA	$ 3,510.00	-	$ 3,959.00	$ 3,959.00
Glassboro Boro.	Fish Pond Rd.	Gravel, BST	1.000	30'	FA	4,505.31	-	5,005.90	5,005.90
Washington Twp.	E. Holly Av., Salina Rd. & Angel Hill Rd.	BST	4.750	24'	Contract	7,680.49	-	9,612.80	9,612.80
Westville Boro.	Oak, Birch & High Sts.	BST	.984	22-26'	Contract	2,224.30	-	2,471.45	2,471.45
Woolwich Twp.	Moravian Church Rd.	Storm Damage Repair	.270	-	FA	3,465.00	-	3,991.39	3,991.39
		Totals	7.854			$21,385.10	-	$25,040.54	$25,040.54
				HUDSON COUNTY					
East Newark Boro.	Reynolds Av.	Sheet Asph.	.087	15'	Contract	$ 2,380.80	$ 238.07	$ 2,645.33	$ 2,964.70

(continued on Sheet #4)

TOWNSHIP & BOROUGH AID ROADS COMPLETED JANUARY 1, 1945 to DECEMBER 31, 1945 (continued, Sheet #4)

Municipality	Name of Road	Type	Mileage	Paved Width	Method of Construction	State's Share of Constr.	State's Share of Engr.	Final Cost of Constr.	Total Cost of Project
				HUDSON COUNTY (continued)					
Guttenberg Town	Park Av.	Sheet Asph.	.200	36'	Contract	$13,156.83	$1,295.95	$14,618.70	$ 16,058.64
Guttenberg Town	68th St.	Sheet Asph.	.810	30'	Contract	41,075.01	3,384.59	45,638.90	49,399.55
Harrison Town	Reynolds Av.	Sheet Asph.	.120	15&30'	Contract	4,384.82	438.48	4,872.02	5,432.70
Harrison Town	Williams St.	Sheet Asph.	.170	36'	Contract	8,811.13	881.12	9,790.15	10,769.17
North Bergen Twp.	Grand Av.	Sheet Asph.	.341	40'	Contract	27,704.56	2,534.97	30,782.85	33,599.48
North Bergen Twp.	79th St.	Sheet Asph.	.275	42'	Contract	22,891.95	2,176.56	25,435.50	29,314.70
Secaucus Town	Grace St.	Grading	.198	-	Contract	14,445.00	1,415.61	16,050.00	17,622.90
		Totals	2.201			$134,850.10	$12,365.35	$149,833.45	$165,161.84
				HUNTERDON COUNTY					
Bloomsbury Boro.	East St.	Type "T"	.060	20'	FA	$ 900.00	-	$ 1,171.75	$ 1,171.75
				MERCER COUNTY					
Hamilton Twp.	Walnut Av. Storm Drain	Drainage	.095	-	Contract	$ 2,503.17	-	$ 2,781.30	$ 2,781.30
Hopewell Boro.	Model Av., Sec. #3	Type "A"	.087	20'	Contract	4,500.00	-	5,457.08	5,457.08
			.182			$ 7,003.17	-	$ 8,238.38	$ 8,238.38
				MIDDLESEX COUNTY					
Carteret Boro.	Pershing Av.	FA-BC-1	.265	30'	Contract	$ 10,350.00	-	$ 12,876.54	$ 12,876.54
Cranbury Twp.	Cranbury Station Rd.	MIP BST	1.000	24'	Contract	5,457.84	180.00	6,064.27	6,264.27
		Totals	1.265			$ 15,807.84	180.00	$ 18,940.81	$ 19,140.81
				MONMOUTH COUNTY					
Atlantic Twp.	Jerseyville Rd.	MIP BST	1.560	24'	FA	$ 3,700.00	-	$ 4,347.46	$ 4,347.46
Belmar Boro.	"A" & "C" Sts., Sec. #2	BST	.595)	26 to	Contract	8,840.85	159.15	9,823.16	10,312.22
		Gravel	.171)	30'					
Eatontown Boro.	Maple Av.	MIP BST	.346	30'	Contract	1,863.50	-	2,070.56	2,070.56
Fair Haven Boro.	Lake Av.	MIP BST	.220	34'	Contract	2,700.00	-	3,768.50	3,768.50
Freehold Twp.	East Freehold-Halls Mills Rd.	MIP BST	1.450	20-24'	FA	4,000.00	-	4,450.14	4,450.14
Howell Twp.	Randolph Rd.	MIP BST	1.500	24'	FA	4,000.00	-	4,983.94	4,983.94
Keyport Boro.	Main St.	Type "A"	.777	33'	Contract	4,657.77	-	7,156.88	7,156.88
Middletown Twp.	Brainard Av.	Gravel, cacl.	.559	28'	Contract	2,090.61	-	2,322.90	2,322.90
Monmouth Beach Boro.	Valentine St.	Gravel, MIP	.226	33.80'	Contract	2,346.01	-	2,606.68	2,606.68

(continued on Sheet #5)

TOWNSHIP & BOROUGH AID ROADS COMPLETED JANUARY 1, 1945 to DECEMBER 31, 1945 (continued, Sheet #5)

Municipality	Name of Road	Type	Mileage	Paved Width	Method of Construction	State's Share of Constr.	State's Share of Engr.	Final Cost of Constr.	Total Cost of Project
				MONMOUTH COUNTY (continued)					
Neptune City Boro.	Rosewood Pl., Woodland, Laurel & R.R. Avs.	Type "A" Gravel BST	.127) .670)	26 to 30'	Contract	$ 8,700.00	-	$10,228.57	$11,251.43
Raritan Twp.	Beers St.	Gravel	.530	26'	FA	1,315.71	-	1,461.90	1,461.90
Raritan Twp.	Bethany Rd., Sec.#2	Gravel	.850	26'	FA	2,000.00	-	2,721.10	2,721.10
Rumson Boro.	Bellevue Av.	MIP BST	.670	25.5-30'	Contract	2,700.00	-	3,370.98	3,370.98
Sea Girt Boro.	N.Y. & Baltimore Blvds., The Crescent & 1st Av.	MIP BST Gravel	1.245) .145)	30 to 40'	Contract	7,365.29	-	8,612.91	8,890.91
		Totals	11.641			$56,279.74	-	$67,925.68	$69,715.60
				MORRIS COUNTY					
Chester Twp.	Parker Rd., Sec.#1	Bit.Pen.Mac.	.378	18&30'	Contract	$10,800.00	-	$14,100.44	$14,100.44
Montville Twp.	River Rd., Sec.#2	Bit.Pen.Mac.	.388	18'	Contract	8,770.22	$ 349.20	9,744.69	10,132.69
Morris Twp.	Western Av., Secs.#2&3	Type "A"	.814	20-30'	Contract	29,329.81	732.60	32,732.40	37,975.55
Riverdale Boro.	Matthews Rd.	Drainage	.130	-	Contract	2,111.40	-	2,346.00	2,346.00
		Totals	1.710			$51,011.43	$1,081.80	$58,923.53	$64,554.68
				OCEAN COUNTY					
Beach Haven Boro.	Amber, 2nd, 3rd, 4th, 5th, 6th, 7th Sts., Engleside Av.	Gravel, Recons.	.476	36-60 & 75'	FA	$ 4,000.00	-	$ 5,198.50	$ 5,198.50
Beach Haven Boro.	Holyoke, Glendola, Fairview, Essex, various sts.	MIP BST	3.140	26 to 76'	FA	9,600.00	-	11,727.43	11,727.43
Berkeley Twp.	20th, Bayview & 24th Avs.	Gravel	.700	30'	FA	3,481.47	-	3,868.30	3,868.30
Harvey Cedars Boro.	73rd, 74th, 76th, 77th, 78th, 80th, 81st Sts.	Gravel, Recons.	.433	36-40'	Contract	6,252.25	$ 389.70	6,946.94	7,379.94
Little Egg Harbor Twp.	Tuckerton-Little Beach Rd.	MIP BST	5.000	20&30'	FA	8,931.82	-	9,924.24	9,924.24
Long Beach Twp.	Atlantic Av.	Gravel, Recons.	1.000	30'	FA	4,000.00	-	5,405.50	5,405.50
Pt.Pleasant Boro.	Gowdy & Borden Avs.	Gravel	.578	33'	FA	2,292.05	-	2,546.72	2,546.72
Ship Bottom Boro.	23rd St.	Gravel	.104	36'	FA	626.04	-	740.55	740.55
Ship Bottom Boro.	30th, 29th, 28th, 24th Sts.	Gravel	.438	26&36'	FA	3,373.96	-	3,748.85	3,748.85
Surf City Boro.	S.2nd, S.1st, Division Av., N.1st & N.3rd Sts.	Gravel	.492	36&48'	Contract	5,920.61	442.80	6,578.46	7,070.46
		Totals	12.361			$48,478.20	$ 832.50	$56,685.49	$57,610.49

(continued on Sheet #6)

TOWNSHIP & BOROUGH AID ROADS COMPLETED JANUARY 1, 1945 to DECEMBER 31, 1945 (continued, Sheet #6)

Municipality	Name of Road	Type	Mileage	Paved Width	Method of Construction	State's Constr.	Share of Engr.	Final Cost of Constr.	Total Cost of Project
				PASSAIC COUNTY					
Haledon Boro.	E.Barbour & Roe Sts.	Type "A"	.260	24&30'	Contract	$ 7,291.19	$208.81	$ 8,101.32	$ 8,711.32
Little Falls Twp.	Crane St.	Bit.Pen.Mac.	.165	20'	Contract	6,457.55	148.50	7,175.05	7,340.05
Prospect Park Boro.	N. 11th St.,Sec.#2	Type "A"	.317	36'	Contract	4,990.73	285.30	5,545.25	5,862.25
Totowa Boro.	McKenney,Lincoln & Young Avs.	Bit.Pen.Mac.	.389	20-30'	Contract	6,490.18	350.10	7,211.31	8,218.58
Totowa Boro.	Shepards Lane (Storm Damage)	2nd Grade Stone	.420	18'	FA	558.27	-	620.30	620.30
		Totals	1.551			$25,787.92	$992.71	$28,653.23	$30,752.50
				SALEM COUNTY					
Alloway Twp.	Coleman Rd.	MIP BST	1.657	26'	Contract	$ 8,361.00	$298.26	$ 9,290.00	$ 9,621.40
Alloway Twp.	Stretch Rd.	Gravel BST	.400	26'	FA	2,916.90	-	3,241.19	3,241.19
Lower Penns Neck Twp.	Mahoney Rd.	Gravel BST	.750	30'	FA	2,300.00	-	3,748.68	3,748.68
Lower Penns Neck Twp.	Morningside Drive	Bit.Soil Stab.	.310	30'	FA	1,800.00	-	4,795.59	4,795.59
Lower Penns Neck Twp.	Union & Jaquette Sts.	Gravel BST	.500	30'	FA	3,600.00	-	4,325.58	4,325.58
Penns Grove Boro.	Regional Dr.,Dixie Dr.	MIP BST	.017	27'	Contract	1,300.00	-)		
Upper Penns Neck Twp.	Regional Dr.,Dixie Dr.	MIP BST	.559	27'	Contract	3,803.90	92.08)	5,671.00	5,816.80
Pittsgrove Twp.	Elmer-Greenville Rd.	Gravel CaCl	1.550	26'	Contract	8,743.18	863.15	9,714.64	10,686.10
Quinton Twp.	Stretch Rd.	Gravel BST	.400	26'	FA	2,921.40	-	3,246.20	3,246.20
Salem City	Crossland,Cook & Victory Avs.	MIP BST	.650	30'	Contract	4,349.03	117.00	4,832.25	4,962.25
Upper Penns Neck Twp.	Avenue I Extension	Gravel BST	.390	30'	FA	3,150.00	-	3,655.83	3,655.83
Upper Penns Neck Twp.	Del-a-veu,Lanning, Ordmont,E.End Avs.	Gravel MIP	.729	24-30'	Contract	7,847.71	656.10	8,719.68	10,029.13
Upper Pittsgrove Twp.	Elmer-Keans Cor.Rd., Sec.#1	Gravel BST	1.000	26'	Contract	7,206.61	720.66	8,007.35	8,808.08
		Totals	8.912			$58,299.73	$2,747.25	$69,247.99	$72,936.83

(continued on Sheet #7)

TOWNSHIP & BOROUGH AID ROADS COMPLETED JANUARY 1, 1945 to DECEMBER 31, 1945 (continued, Sheet #7)

				Paved	Method of	State's Share of		Final Cost	Total Cost
Municipality	Name of Road	Type	Mileage	Width	Construction	Constr.	Engr.	of Constr.	of Project
				SOMERSET COUNTY					
Bernards Twp.	Martinsville-Liberty Cor. Rd., Sec.#5A & Old Pluckemin Rd. Ext.	Type "A"	.687	20&28'	Contract	$16,310.65	-	$18,122.95	$18,122.95
Bridgewater Twp.	North Bridge St., Sec.#3	Type "T"	.320	20'	Contract	7,786.53	$ 288.00	8,651.70	8,971.70
Bridgewater Twp.	North Gaston Av.	Type "T"	.140	20'	Contract	6,354.15	126.00	7,060.17	7,200.17
		Totals	1.147			$30,451.33	$ 414.00	$33,834.82	$34,294.82
				SUSSEX COUNTY					
				None					
				UNION COUNTY					
				None					
				WARREN COUNTY					
Independence Twp.	Russling Rd.	Gravel BST	1.920	20'	Contract	$ 9,487.74	$ 598.20	$10,541.93	$11,206.60
	GRAND TOTALS		99.898			$771,867.35	$28,154.05	$883,257.78	$924,519.72

Note: No State Funds expended for Right of Way.

TOWNSHIP & BOROUGH AID ROADS UNDER CONSTRUCTION DECEMBER 31, 1945

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			ATLANTIC COUNTY				
Buena Vista Twp.	Jackson Rd., Sec. #1	Gravel	.50	26'	FA	$1,964.96	$2,183.28
Egg Harbor Twp.	Delaware Rd.	Gravel Repairs	2.88	20'	FA	1,800.00	2,000.00
			BERGEN COUNTY				
Hasbrouck Heights Boro.	Passaic Av. & Blvd. (Traffic Circle)	Bit.Pen.Mac.	.11	30 & 48'	Contract	17,500.00	19,444.44
Hillsdale Boro.	Hillsdale Av., Sec. #2	Bit.Pen.Mac.	.37	20 & 30'	Contract	11,660.00	12,955.55
Norwood Boro.	South St.	Bit.Pen.Mac.	.265	20'	Contract	6,750.00	7,500.00
			BURLINGTON COUNTY None				
			CAMDEN COUNTY				
Laurel Springs Boro.	Summit Av.	Gravel BST	.149	26'	FA	900.00	1,000.00
			CAPE MAY COUNTY				
Sea Isle City	Pleasure Av. & various sts.	Gravel	.955	30 & 45'	Contract	6,197.18	6,885.75
			CUMBERLAND COUNTY				
Downe Twp.	Dr. Johnson Rd.	Gravel	.600	26'	FA	3,150.00	3,500.00
Fairfield Twp.	Stage Coach Rd.	Gravel	.880	26'	FA	4,050.00	4,500.00
Hopewell Twp.	Seeley Rd. (Holding Rd.)	Gravel	1.160	26'	FA	3,600.00	4,000.00
Lawrence Twp.	Eagle Island-Cedar Creek Rd.	Grading	1.000	-	FA	3,240.00	3,600.00
			ESSEX COUNTY None				
			GLOUCESTER COUNTY				
National Park Boro.	Asbury Av., Sec. #2	Gravel Ca.Cl.	.500	30'	FA	2,070.00	2,300.00
			HUDSON COUNTY None				

(continued on Sheet #2)

TOWNSHIP & BOROUGH AID ROADS UNDER CONSTRUCTION DECEMBER 31, 1945 (continued, Sheet #2)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			HUNTERDON COUNTY				
Holland Twp.	Spring Mills-Holland Church Rd.,Sec.#5	BST	.952	28'	Contract	$4,000.00	$4,444.44
			MERCER COUNTY				
			None				
			MIDDLESEX COUNTY				
South Amboy City	Stevens Av.	FA-BC-1	.423	50'	Contract	13,500.00	15,000.00
			MONMOUTH COUNTY				
			None				
			MORRIS COUNTY				
			None				
			OCEAN COUNTY				
Jackson Twp.	Frank Applegate Rd.	Gravel	2.587	26'	Contract	15,697.83	17,442.04
			PASSAIC COUNTY				
			None				
			SALEM COUNTY				
Alloway Twp.	Ernest-Garton Rd.,Sec.#2, & Marshall Rd.	Gravel	1.383	26'	Contract	8,730.00	9,700.00
Lower Penns Neck Twp.	North & South Rds.,Washington & Hamilton Avs.	Gravel MIP	1.010	33'	FA	5,400.00	6,000.00
Mannington Twp.	Kernan Road Causeway	Gravel BST	.275	26'	Contract	12,411.00	13,790.00
Penns Grove Boro.	West Harmony St.	FA-BC-1	.161	22'	Contract	6,300.00	7,000.00
Pilesgrove Twp.	Jill Rd.	Gravel	.900	26'	FA	5,400.00	6,000.00
Pittsgrove Twp.	Sheep Pen Rd.	Gravel	1.200	26'	Contract	9,900.00	11,000.00
Woodstown Boro.	Dickinson St.(Storm Sewer)	Drainage	.251	-	Contract	7,000.00	7,777.78
			SOMERSET COUNTY				
			None				

(continued on Sheet #3)

TOWNSHIP & BOROUGH AID ROADS UNDER CONSTRUCTION DECEMBER 31, 1945 (continued, Sheet #3)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			SUSSEX COUNTY				
			None				
			UNION COUNTY				
			None				
			WARREN COUNTY				
Greenwich Twp.	Lows Hollow Rd.,Lows Hollow Rd.Ext. & Paul Scott Rd. (Flood Damage)	Gravel	1.000	18'	FA	$ 9,000.00	$ 10,000.00
Lopatcong Twp.	Uniontown,Lows Hollow, Unangst & Jerry Bowers Rds. (Flood Damage)	Gravel	2.850	12 to 18'	FA	9,000.00	10,000.00
		Grand Totals	22.361			$169,220.97	$188,023.28

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			ATLANTIC COUNTY				
Absecon City	Church St. & Natlie Terr.	FA-BC-1	.44	20'	Contract	$ 6,000.00	$ 6,666.67
Absecon City	Iowa Av., School St. & Shady Lane	FA-BC-1	.57	20'	Contract	6,050.00	6,722.22
Absecon City	Lee Av., E.Bolton Av. & Franklin Blvd.	FA-BC-1	.51	20'	Contract	5,300.00	5,888.88
Absecon City	Wyoming Av. & Huron Av., Sec.#2	FA-BC-1	.43	20'	Contract	6,000.00	6,666.67
Brigantine City	38th St., South	BST	.34	20'	Contract	3,000.00	3,333.33
Brigantine City	Brigantine Av.	BST	.70	20'	Contract	2,000.00	2,222.22
Brigantine City	Ocean Av., Sec.#2	FA-BC-1	.30	20'	Contract	4,000.00	4,444.44
Egg Harbor Twp.	Delaware Rd.	BST	2.88	20'	Contract	4,500.00	5,000.00
Egg Harbor Twp.	Poplar Av.	Gravel	.26	26'	Contract	1,000.00	1,111.11
Egg Harbor Twp.	School House Rd. & Bevis Mill Rd.	Gravel	1.55	26'	Contract	5,400.00	6,000.00
Egg Harbor City	Arago St.	FA-BC-1	.19	20'	Contract	2,700.00	3,000.00
Egg Harbor City	Atlantic & Arago Avs., Sec. #2	FA-BC-1	.95	20'	Contract	6,000.00	6,666.67
Egg Harbor City	Atlantic & Boston Avs.	FA-BC-1	.39	20'	Contract	2,500.00	2,777.77
Egg Harbor City	Buerger St., Norfolk Av., Campe St., Claudius St.	Gravel	1.16	20'	Contract	3,600.00	4,000.00
Egg Harbor City	Campe St. (paving)	FA-BC-1	1.05	20'	Contract	6,300.00	7,000.00
Folsom Boro.	8th St.	Gravel	1.33	20'	Contract	3,500.00	3,888.89
Hammonton Town	2nd Rd., Sec.#2	Gravel	1.00	26'	Contract	5,400.00	6,000.00
Linwood City	Oak Av., Sec.#3, Seaview Av., Sec.#3 & West Av., Sec.#4	FA-BC-1	.64	30 & 20'	Contract	6,050.00	6,722.22
Linwood City	Laurel Av., Sec.#2, Seaview, West & Devonshire Avs.	FA-BC-1	.50	20'	Contract	7,000.00	7,777.77
Linwood City	Poplar Av., Sec.#2, VanSant Av., Sec.#2, & Wabash Av.	FA-BC-1	.45	20'	Contract	6,300.00	7,000.00
Linwood City	VanSant Av. & Oak Grove Av.	FA-BC-1	.34	20'	Contract	6,400.00	7,111.11
Margate City	Brunswick Av. & various sts.	FA-BC-1	1.13	20'	Contract	7,200.00	8,000.00
Margate City	Nassau, Osborne, Pembroke, Quincy, Rumson, Sumner Avs.	FA-BC-1	1.20	25-31'	Contract	15,600.00	17,333.34
Margate City	Amherst Av., Sec.#2, & Monmouth Av., Sec.#3	FA-BC-1	.69	20'	Contract	7,000.00	7,777.77

(continued on Sheet #2)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #2)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
ATLANTIC COUNTY (continued)							
Mullica Twp.	Elwood-Weekstown, Sec.#3	Gravel	.80	26'	Contract	$2,859.96	$3,177.73
Mullica Twp.	Locust St., Anderson St. & Thurston Av.	Gravel	.90	20'	Contract	2,000.00	2,222.22
Mullica Twp.	Union Av. & various sts.	Gravel	2.42	30'	Contract	3,600.00	4,000.00
Mullica Twp.	Weymouth Av.	Gravel	1.80	30'	Contract	3,200.00	3,555.55
Northfield City	Davis Av.	FA-BC-1	.35	20'	Contract	7,200.00	8,000.00
Northfield City	Fairbanks Av.	FA-BC-1	.60	20'	Contract	9,100.00	10,111.11
Northfield City	1st & 2nd Avs.	FA-BC-1	1.10	20'	Contract	6,000.00	6,666.67
Northfield City	Roosevelt Av., Fairway & Putting Green	FA-BC-1	.60	20'	Contract	6,300.00	7,000.00
Pleasantville City	California, Edgewater & Glendale Avs.	FA-BC-1	.72	20'	Contract	11,900.00	13,222.22
Pleasantville City	East Reading, Walnut, Plaza Place & Clemmatis Avs.	FA-BC-1	.61	20'	Contract	7,200.00	8,000.00
Pleasantville City	Tunis, Franklin, Edgeley Avs.	FA-BC-1	.50	20'	Contract	7,000.00	7,777.78
Pleasantville City	Woodland & E.Edgewater Avs.	FA-BC-1	.53	20'	Contract	9,100.00	10,111.11
Port Republic City	Blakes & Adams Avs.	Gravel	.62	26'	FA	1,800.00	2,000.00
Somers Point City	Sunny Av. & Groveland Av.	Gravel	.55	36-42'	Contract	2,700.00	3,000.00
Ventnor City	Balfour, Freemont, Oxford, Suffolk & Somerset Avs.	Gravel	1.05	30'	Contract	8,100.00	9,000.00
Ventnor City	Newark, Roxborough, Ventnor, Garden Plaza	FA-BC-1	.30	25-45'	Contract	7,000.00	7,777.78
Weymouth Twp.	Estell Av.	Gravel	2.00	26'	FA	1,800.00	2,000.00
BERGEN COUNTY							
Bergenfield Boro.	E. Clinton Av., Sec.#2	Bit.Pen.Mac.	.35	20'	Contract	5,400.00	6,000.00
Fair Lawn Boro.	Berdan Av.	Bit.Pen.Mac.	1.25	20'	Contract	20,000.00	22,222.22
Mahwah Twp.	Miller Rd.	Bit.Pen.Mac.	.35	20'	Contract	4,500.00	5,000.00
Mahwah Twp.	Miller Rd., Sec.#2	Bit.Pen.Mac.	.15	20'	Contract	4,000.00	4,444.44
Mahwah Twp.	Miller Rd., Sec.#3	Bit.Pen.Mac.	.25	20'	Contract	5,000.00	5,555.55
Northvale Boro.	New York Av., Pierron St.	Bit.Pen.Mac.	.27	20'	Contract	4,800.00	5,333.33
Oakland Boro.	W. Oakland Av., Sec.#2	Bit.Pen.Mac.	.33	20-30'	Contract	9,000.00	10,000.00
Old Tappan Boro.	Washington Av. North (Reynolds Rd.)	Bit.Pen.Mac.	.91	18'	Contract	12,600.00	14,000.00
Palisades Park Boro.	E. Edsall Blvd.	Bit.Pen.Mac.	.40	20'	Contract	16,200.00	18,000.00

(continued on Sheet #3)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #3)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
		BERGEN COUNTY (continued)					
Ridgefield Boro.	Elm Av., Sec.#2, N.Y.St., & Ray Av.	Bit.Pen.Mac.	.48	20'	Contract	$18,000.00	$20,000.00
River Vale Twp.	Poplar Rd. (Reynolds Rd.)	Bit.Pen.Mac.	.61	18'	Contract	8,100.00	9,000.00
River Vale Twp.	Sand Rd., Sec.#2	Bit.Pen.Mac.	.22	20-28'	Contract	5,000.00	5,555.55
South Hackensack Twp.	Caliconeck Rd.	"A" or "T"	.75	20'	Contract	2,000.00	2,222.22
South Hackensack Twp.	Vreeland Av.	Bit.Pen.Mac.	.12	20'	Contract	2,000.00	2,222.22
Teaneck Twp.	Glenwood Av.	Bit.Pen.Mac.	.62	20'	Contract	12,600.00	14,000.00
Tenafly Boro.	Front St., Sec.#3	Bit.Pen.Mac.	.19	20'	Contract	4,950.00	5,500.00
Wyckoff Twp.	Grandview Av., Sec.#2	Bit.Pen.Mac.	.25	20'	Contract	4,500.00	5,000.00
		BURLINGTON COUNTY					
Bass River Twp.	Old Atlantic City Rd. & S. Maple Av.	Gravel	1.20	20'	Contract	3,720.00	4,133.33
Beverly City	Bridge, Parker, Oak Sts.	Gravel	.35	20'	Contract	1,800.00	2,000.00
Beverly City	Penna. Av., various sts.	Gravel	2.00	30'	Contract	1,500.00	1,666.66
Bordentown City	West St.	Reinf.Conc.	.15	24'	Contract	5,000.00	5,555.55
Chester Twp.	Blvd., Peter Av., Pine St. & Melrose	Gravel	.75	30'	Contract	3,000.00	3,333.33
Chester Twp.	Coles Av.	"A" or "T"	.66	30'	Contract	9,000.00	10,000.00
Chesterfield Twp.	Sykesville-Chesterfield Rd.	Gravel	.56	26'	Contract	3,600.00	4,000.00
Chesterfield Twp.	White Pine Rd.	Gravel	2.25	30'	Contract	4,500.00	5,000.00
Cinnaminson Twp.	Forked Landing Rd.	Gravel	1.78	30'	Contract	5,400.00	6,000.00
Delanco Twp.	Walnut & Chestnut Sts.	Bit.Pen.Mac.	.34	20'	Contract	3,600.00	4,000.00
Delran Twp.	Garwood Rd.	Gravel	1.00	30'	Contract	6,800.00	7,555.55
Eastampton Twp.	Smithville Rd.	Gravel	1.52	26'	Contract	3,600.00	4,000.00
Eastampton Twp.	Smithville Rd., Sec.#2	Gravel	.48	26'	Contract	2,700.00	3,000.00
Eastampton Twp.	Railroad Av.	Gravel	1.20	30'	Contract	3,600.00	4,000.00
Evesham Twp.	Evans Rd.	Gravel	1.53	26'	Contract	5,400.00	6,000.00
Fieldsboro Boro.	Lockwood Av.	Gravel	.07	30'	Contract	900.00	1,000.00
Fieldsboro Boro.	Washington St., Sec.#2	Gravel	.20	30'	Contract	1,800.00	2,000.00
Florence Twp.	Potts Mill Rd. & Cedar Lane	Gravel	1.85	30'	Contract	5,709.35	6,343.72
Florence Twp.	Railroad Av.	Gravel	.65	30'	Contract	3,600.00	4,000.00
Florence Twp.	Station & Maple Avs.	Gravel	.57	30'	Contract	4,500.00	5,000.00

(continued on Sheet #4)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #4)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
		BURLINGTON COUNTY (continued)					
Hainesport Twp.	Ark Rd.	Gravel	.80	30'	Contract	$3,600.00	$4,000.00
Hainesport Twp.	Bishop St.,Sec.#2	Gravel	.06	24'	Contract	900.00	1,000.00
Hainesport Twp.	Phillips Rd.	Gravel	1.06	30'	Contract	4,500.00	5,000.00
Lumberton Twp.	Ark Rd.	Gravel	.70	30'	Contract	4,500.00	5,000.00
Lumberton Twp.	Eayrestown-Kirby's Mills Rd.	Gravel	.70	30'	Contract	5,400.00	6,000.00
Mansfield Twp.	Hedding-Mansfield Rd.	Gravel	1.60	30'	Contract	6,300.00	7,000.00
Mansfield Twp.	Petticoat Bridge Rd.	Gravel	1.27	26'	Contract	11,600.00	12,888.88
Medford Twp.	Melrose Station Rd.	Gravel	.50	30'	Contract	1,800.00	2,000.00
Medford Lakes Boro.	Mohawk,Mishe Mokwa & Hiawatha Trails	Gravel	.81	26'	Contract	1,800.00	2,000.00
Mount Holly Twp.	Union St.	Bit.Pen.Mac.	.14	29'	Contract	3,600.00	4,000.00
Mount Holly Twp.	Washington St.	"A" or "T"	.25	30'	Contract	9,000.00	10,000.00
Mount Laurel Twp.	Union Mills Rd.	Gravel	3.40	30'	Contract	3,600.00	4,000.00
North Hanover Twp.	Paulson Rd.,Sec.#2	Gravel	1.60	30'	Contract	5,400.00	6,000.00
Palmyra Boro.	Charles St.	Gravel	.28	30'	Contract	1,800.00	2,000.00
Pemberton Twp.	Arneys Mount Rd.	Gravel	1.50	30'	Contract	4,500.00	5,000.00
Riverside Twp.	Rancocas & Lippincott Avs.	Gravel	.70	30'	Contract	2,700.00	3,000.00
Riverside Twp.	Monroe,Adams,Jefferson & Washington Sts.	Gravel	.64	30'	Contract	3,000.00	3,333.33
Shamong Twp.	Smalls-Oak Shade Rd.	Gravel	1.40	30'	Contract	14,400.00	16,000.00
Springfield Twp.	Arneys Mount Rd.	Gravel	2.30	30'	Contract	4,500.00	5,000.00
Springfield Twp.	Three Tuns Rd.	Gravel	1.04	26'	Contract	7,200.00	8,000.00
Tabernacle Twp.	Oak Shade Rd.,Sec.#1	Gravel	.80	30'	Contract	3,600.00	4,000.00
Westampton Twp.	Kings Rd.	Gravel	2.30	26'	Contract	4,500.00	5,000.00
Willingboro Twp.	Stokes Rd.	Gravel	1.10	30'	Contract	3,500.00	3,888.88
Woodland Twp.	Sooy Place-Hedgerhouse Rd.,Sec.#3	Gravel	1.14	26'	Contract	4,500.00	5,000.00
		CAMDEN COUNTY					
Audubon Boro.	Wyoming Av.	FA-BC-1	.90	20'	Contract	10,000.00	11,111.11
Audubon Boro.	Wyoming Av.,Sec.#2	FA-BC-1	.70	20'	Contract	10,000.00	11,111.11
Barrington Boro.	Wood Av.	Gravel	.64	26-30'	Contract	3,540.00	3,933.33
Bellmawr Boro.	Bell Rd.	Bit.Pen.Mac.	.55	20'	Contract	9,088.00	10,097.78
Delaware Twp.	Mill,Green Tree & Marlkress Rds.	Gravel	2.87	30'	Contract	6,855.88	7,617.64

(continued on Sheet #5)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #5)

CAMDEN COUNTY (continued)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
Delaware Twp.	Cropwell Rd.	Gravel	2.20	30'	Contract	$17,085.00	$18,983.33
Delaware Twp.	Murray St., Sherwood & Mercer Avs.	Gravel	1.00	30'	Contract	8,550.00	9,500.00
Delaware Twp.	State St.	Gravel	.80	30'	Contract	9,000.00	10,000.00
Delaware Twp.	Evergreen Av.	Gravel	.27	30'	Contract	2,350.00	2,611.11
Delaware Twp.	Jefferson Av.	Gravel	.30	30'	Contract	13,500.00	15,000.00
Delaware Twp.	Kenilworth Av.	Gravel	.37	30'	Contract	2,700.00	3,000.00
Delaware Twp.	Moore Av.	Gravel	.17	30'	Contract	1,450.00	1,611.11
Gloucester Twp.	Williamstown-Chews Landing Rd.	Gravel	2.01	30'	Contract	7,000.00	7,777.78
Gloucester Twp.	Williamstown-Chews Landing Rd., Sec.#2	Gravel	.68	30'	Contract	4,050.00	4,500.00
Gloucester Twp.	Turnerville-Hickstown Rd.	BST	.79	26'	Contract	3,072.00	3,413.33
Haddonfield Boro.	Kings Highway	FA-BC-1	.43	43.8-52.25'	Contract	50,190.00	55,766.66
Laurel Springs Boro.	East Atlantic Av.	Bit.Pen.Mac.	.55	20'	Contract	17,505.47	19,450.52
Magnolia Boro.	East Atlantic Av., Sec.#2	Bit.Pen.Mac.	.22	23'	Contract	9,000.00	10,000.00
Oaklyn Boro.	Sylvan Av.	FA-BC-1	.08	20'	Contract	4,000.00	4,444.44
Oaklyn Boro.	Sylvan Av., Sec.#2	FA-BC-1	.21	20'	Contract	4,500.00	5,000.00
Pennsauken Twp.	Union Av., Sec.#2	Bit.Pen.Mac.	.16	20'	Contract	3,510.00	3,900.00
Pennsauken Twp.	Union Av., Sec.#3	Bit.Pen.Mac.	.59	20'	Contract	11,700.00	13,000.00
Pine Hill Boro.	Turnerville-Hickstown Rd.	BST	.54	26'	Contract	2,250.00	2,500.00
Runnemede Boro.	Singley Av.	Gravel	.09	26'	Contract	2,250.00	2,500.00
Somerdale Boro.	East Atlantic Av.	Bit.Pen.Mac.	.64	20'	Contract	13,500.00	15,000.00
Waterford Twp.	Genesee Av.	Gravel	.70	30'	Contract	3,060.00	3,400.00
Waterford Twp.	Linden Av.	Gravel	.85	30'	Contract	1,620.00	1,800.00
Waterford Twp.	Third St.	Gravel	.37	30'	Contract	2,000.00	2,222.22
Waterford Twp.	West Atlantic Av. & Genesee Av., Sec.#2	Gravel	.22	30'	Contract	1,440.00	1,600.00
Winslow Twp.	Old Chews Landing, Sec.#2	Gravel	2.00	30'	Contract	5,950.00	6,611.11
Winslow Twp.	Spring Garden St.	Gravel	1.60	30'	Contract	6,840.00	7,600.00
Winslow Twp.	Hayes Mill Rd.	Gravel	.89	30'	Contract	6,000.00	6,666.67
Winslow Twp.	Cooper Folly Rd.	Gravel	1.30	30'	Contract	3,350.00	3,722.22

(continued on Sheet #6)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #6)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			CAPE MAY COUNTY				
Cape May City	Washington, Elmira & various sts.	FA-BC-1	1.25	20'	Contract	$15,000.00	$16,666.67
Ocean City	3rd & various sts.	FA-BC-1	1.27	20'	Contract	17,500.00	19,444.44
Ocean City	18th, 13th, 5th, Atlantic Blvd.	FA-BC-1	1.23	20'	Contract	17,500.00	19,444.44
Ocean City	W. Atlantic Blvd. & various sts.	FA-BC-1	1.19	20'	Contract	17,500.00	19,444.44
Sea Isle City	Central Av.	FA-BC-1	.36	20'	Contract	5,000.00	5,555.55
Sea Isle City	Central Av., 43rd, 42nd & various sts.	FA-BC-1	.67	20'	Contract	5,000.00	5,555.56
Sea Isle City	Central Av., W. Jersey Av., 40th, 39th & 38th Sts.	FA-BC-1	.64	20'	Contract	3,802.82	4,225.35
Stone Harbor Boro.	83rd St.	FA-BC-1	.34	20'	Contract	4,000.00	4,444.44
Stone Harbor Boro.	104th St.	FA-BC-1	.57	20'	Contract	4,000.00	4,444.44
Stone Harbor Boro.	104th St. & Golden Gate Rd.	FA-BC-1	.87	20'	Contract	8,000.00	8,888.88
Wildwood City	N.J. (E.&W.), N.Y., Leaming, Bennett, etc.	FA-BC-1	.88	20-37'	Contract	12,000.00	13,333.33
Wildwood City	N.Y., N.J., Pine, Leaming, etc.	FA-BC-1	1.76	20'	Contract	12,000.00	13,333.33
Wildwood City	Atlantic, Schellenger & Pacific Avs.	FA-BC-1	1.45	20-30'	Contract	12,000.00	13,333.33
Wildwood Crest Boro.	(Project to be determined)	FA-BC-1	-	-	-	3,000.00	3,333.33
Wildwood Crest Boro.	Atlantic Av.	Gravel	.52	30'	Contract	6,000.00	6,666.66
Wildwood Crest Boro.	Crocus Rd. & Forgetmenot Rd.	FA-BC-1	.38	20'	Contract	3,000.00	3,333.33
Woodbine Boro.	Adams Av., Sec. #2	FA-BC-1	.13	20'	Contract	3,000.00	3,333.33
Woodbine Boro.	Adams Av. & DeHirsch Av.	FA-BC-1	.56	20'	Contract	2,000.00	2,222.22
Woodbine Boro.	Adams Av., Sec. #3	FA-BC-1	.25	20'	Contract	4,000.00	4,444.44
			CUMBERLAND COUNTY				
Commercial Twp.	Goose Island Rd.	Gravel	.20	26'	FA	1,620.00	1,800.00
Commercial Twp.	Jeffreys Rd.	Gravel	.70	30'	Contract	1,530.00	1,700.00
Commercial Twp.	Light House Rd.	Gravel	1.50	26'	Contract	2,700.00	3,000.00
Commercial Twp.	Miller Rd.	Gravel	.60	26'	Contract	4,050.00	4,500.00
Commercial Twp.	Snow Hill Rd., Sec. #2	Gravel	1.00	26'	FA	3,420.00	3,800.00

(continued on Sheet #7)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #7)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
		CUMBERLAND COUNTY (continued)					
Commercial Twp.	Snow Hill Rd., Sec.#3	Gravel	.30	26'	Contract	$1,350.00	$1,500.00
Deerfield Twp.	Jesse Bridge Rd.	Gravel	.90	26'	FA	6,120.00	6,800.00
Deerfield Twp.	Kenyon Rd.	BST	1.00	20'	Contract	2,500.00	2,777.78
Deerfield Twp.	Lebanon Rd., Sec.#2	Gravel	.40	26'	FA	2,340.00	2,600.00
Deerfield Twp.	Maxin Av.	Gravel	.42	26'	FA	2,160.00	2,400.00
Deerfield Twp.	Willow St., Poplar St. & Wooster Av.	Gravel	.58	30'	Contract	370.00	411.11
Downe Twp.	Nantuxent Drive	Gravel	.38	26'	FA	3,240.00	3,600.00
Downe Twp.	Newcomb Rd.	Gravel	.60	26'	Contract	3,240.00	3,600.00
Fairfield Twp.	Clark's Pond Rd., Sec.#3	Gravel	.50	26'	Contract	3,240.00	3,600.00
Landis Twp.	Union Rd. Extension	Grad., Drain.	1.13	-	Contract	12,598.52	13,998.35
Lawrence Twp.	Eagle Island & Cedar Creek Rds.	Gravel	1.00	26'	Contract	2,160.00	2,400.00
Maurice River Twp.	Cape Rd.	Gravel	1.00	26'	FA	3,600.00	4,000.00
Maurice River Twp.	East Point Rd., Sec.#1	Gravel	1.00	26'	FA	2,700.00	3,000.00
Stow Creek Twp.	Frank Davis Rd.	Gravel	.90	30'	Contract	2,250.00	2,500.00
Vineland Boro.	8th St.	FA-BC-1	1.00	20'	Contract	9,000.00	10,000.00
Vineland Boro.	Peach St.	FA-BC-1	1.00	20'	Contract	9,000.00	10,000.00
Vineland Boro.	Plum St.	FA-BC-1	1.00	20'	Contract	4,500.00	5,000.00
		ESSEX COUNTY					
Belleville Town	Belmont Av.	FA-BC-2	.48	36'	Contract	27,000.00	30,000.00
Bloomfield Town	Hoover Av.	FA-BC-1	.38	30'	Contract	13,500.00	15,000.00
Caldwell Twp.	Big Piece Rd., Sec.#2	Bit.Pen.Mac.	.96	20'	Contract	20,666.67	22,962.96
Caldwell Boro.	Prospect St.	Bit.Pen.Mac.	.45	20'	Contract	9,000.00	10,000.00
Cedar Grove Twp.	Sherman Av.	Bit.Pen.Mac.	.20	30'	Contract	13,950.73	15,500.81
Essex Fells Boro.	Rensselaer Rd., Sec.3, Oldchester & Fells Rd..	"A" or "T"	1.60	25'	Contract	9,000.00	10,000.00
Essex Fells Boro.	Rensselaer Rd., Sec.#4	"A" or "T"	.37	25'	Contract	9,000.00	10,000.00
Glen Ridge Boro.	Ridgewood Av.	Bit.Conc.	2.00	20-46'	Contract	50,000.00	55,555.55
Irvington Town	Brookside Av.	Reinf.Conc.	.01	30'	Contract	6,840.00	7,600.00
Irvington Town	Hawthorne Av.	Sh.Asphalt	.03	48'	Contract	4,230.00	4,700.00
Irvington Town	Marshall St.	FA-BC-2	.13	40'	Contract	10,000.00	11,111.11
Irvington Town	North Maple Av.	FA-BC-2	.12	40'	Contract	11,000.00	12,222.22

(continued on Sheet #8)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #8)

ESSEX COUNTY (continued)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Fund
Irvington Town	Olson Place	Type "A"	.04	30'	Contract	$1,800.00	$2,000.00
Irvington Town	Stanley St.	FA-BC-2	.05	30'	Contract	3,110.00	3,455.55
Irvington Town	Union Av.,Sec.#2	FA-BC-2	.63	30'	Contract	18,850.00	20,944.44
Irvington Town	Western Parkway	Reinf.Conc.	.10	30'	Contract	3,000.00	3,333.33
Livingston Twp.	Burnett St.	Bit.Pen.Mac.	.27	30'	Contract	11,500.00	12,777.78
Livingston Twp.	Crescent Rd.	Bit.Pen.Mac.	.33	30'	Contract	7,625.60	8,472.89
Livingston Twp.	Hillside Av.,Sec.#2	Bit.Pen.Mac.	.83	16-22'	Contract	9,000.00	10,000.00
Maplewood Twp.	Cedar Lane,Sec.#2	Bit.Pen.Mac.	.24	30'	Contract	11,000.00	12,222.22
Maplewood Twp.	Rutgers St.	Reinf.Conc.	.23	20'	Contract	5,400.00	6,000.00
Maplewood Twp.	Valley St.,Sec.#3	Reinf.Conc.	.08	40'	Contract	5,000.00	5,555.56
Maplewood Twp.	Burnett Av.,Sec.#2	Reinf.Conc.	.19	20'	Contract	10,948.21	12,164.68
Millburn Twp.	Hobart Av.	"A" or "T"	.80	30'	Contract	17,872.41	19,858.23
Montclair Town	Harrison Av.	Storm Drain	.28	-	Contract	39,600.00	44,000.00
Verona Boro.	Derwent Av.	"A" or "T"	.35	28'	Contract	12,000.00	13,333.33
West Caldwell Boro.	Park Av.,Sec.#2, & Washington Av.	"A" or "T"	.27	30'	Contract	12,000.00	13,333.33
West Caldwell Boro.	Park Av.,Sec.#3	"A" or "T"	.20	30'	Contract	5,000.00	5,555.55
West Caldwell Boro.	Washington Av.,Sec.#2	"A" or "T"	.21	30'	Contract	11,500.00	12,777.78
West Orange Town	Mountain Av.	"A" or "T"	.74	24-30'	Contract	29,970.00	33,300.00

GLOUCESTER COUNTY

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Fund
Clayton Boro.	Maple St.	FA-BC-1	.31	20'	Contract	4,500.00	5,000.00
Clayton Boro.	Pearl St.	FA-BC-1	.65	20'	Contract	990.00	1,100.00
Clayton Boro.	High St.	FA-BC-1	.75	20'	Contract	14,500.00	16,111.11
Deptford Twp.	1st,2nd,3rd,6th,Summit, Poplar,etc.	Gravel	1.59	30'	Contract	6,000.00	6,666.67
Deptford Twp.	Florence,Woodland,Gilbert, etc.	Gravel	1.12	30'	Contract	7,000.00	7,777.77
Deptford Twp.	Parkside,Bellmore,Sunset & Bellview Avs.	Gravel	.84	30'	Contract	7,000.00	7,777.77
East Greenwich Twp.	Bressler Rd.	Gravel	1.65	30'	Contract	7,500.00	8,333.32
East Greenwich Twp.	Bell Av.,Berkeley Av., County House Rd.,Jessup Mill Rd.	Gravel	2.35	30'	Contract	370.00	411.11
East Greenwich Twp.	Lodge Av.,Berkeley Av.,etc.	Gravel	1.70	30'	Contract	8,630.00	9,588.88

(continued on Sheet #9)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #9)

GLOUCESTER COUNTY (continued)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
Elk Twp.	Buck Rd., Sec. #4	Gravel	.20	30'	Contract	$ 720.00	$ 800.00
Elk Twp.	Cedar Lake Rd.	Gravel	1.00	30'	Contract	4,100.00	4,555.55
Elk Twp.	Ewan-Bridgeton Rd.	Gravel	1.20	30'	Contract	4,000.00	4,444.44
Elk Twp.	Harrisonville-Ferrell Rd., Sec. #2	Gravel	.50	30'	Contract	1,800.00	2,000.00
Elk Twp.	Stanger Av.	Gravel	1.20	30'	Contract	2,200.00	2,444.44
Franklin Twp.	Brewster Rd., Sec. #2	Gravel	1.30	30'	FA	3,288.62	3,654.01
Franklin Twp.	Marshall Mill Rd., Sec. #3	Gravel	1.60	30'	Contract	7,000.00	7,777.78
Franklin Twp.	Williamstown Rd., Secs. #3 & #4	Gravel	2.70	30'	Contract	7,500.00	8,333.33
Glassboro Boro.	Franklin St. & Stanger Av.	Gravel	1.20	30'	Contract	8,000.00	8,888.88
Glassboro Boro.	Franklin St., Railroad Av. & Market Place	Gravel	1.95	30'	Contract	10,000.00	11,111.10
Glassboro Boro.	Princeton, Columbia, Pennsylvania Rds., etc.	Gravel	2.00	30'	Contract	3,490.00	3,877.77
Greenwich Twp.	Jefferson St.	Gravel	.25	30'	FA	1,102.50	1,225.00
Greenwich Twp.	Rambo Av., Sec. #2	Gravel	.12	30'	FA	756.00	840.00
Greenwich Twp.	Swedesboro Rd., Sec. #2	Gravel	.50	30'	FA	2,115.00	2,350.00
Greenwich Twp.	Washington, Railroad & various sts.	Gravel	1.95	30'	Contract	4,000.00	4,444.44
Greenwich Twp.	Watkins Av., various sts.	Gravel	2.51	30'	Contract	5,000.00	5,555.55
Greenwich Twp.	Washington, Maple, Walnut & Pine Sts.	FA-BC-1	.60	20'	Contract	7,026.50	7,807.22
Harrison Twp.	Back Creek Rd., Sec. #2	Gravel	1.20	30'	FA	4,300.00	4,777.77
Harrison Twp.	Bishop Rd.	Gravel	1.80	30'	Contract	4,200.00	4,666.66
Harrison Twp.	Heilig Rd.	Gravel	.70	30'	Contract	2,950.00	3,277.78
Harrison Twp.	Jackson Rd.	Gravel	1.20	30'	Contract	4,000.00	4,444.44
Harrison Twp.	Souder Rd.	Gravel	.85	30'	FA	3,000.00	3,333.33
Logan Twp.	Hendrickson Mill Rd., etc.	Gravel	.90	30'	Contract	4,500.00	5,000.00
Logan Twp.	Township Line Rd.	Gravel	1.22	30'	Contract	5,500.00	6,111.10
Mantua Twp.	Heilig Rd. & Dilksboro Rd., Sec. #2	Gravel	1.00	30'	Contract	4,500.00	5,000.00
Mantua Twp.	Various sts. in Sewell & Mantua (1943)	Gravel	2.50	30'	Contract	5,000.00	5,555.56
Mantua Twp.	Various sts. in Sewell & Mantua (1944)	Gravel	1.20	30'	Contract	4,500.00	5,000.00

(continued on Sheet #10)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #10)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			GLOUCESTER COUNTY (continued)				
Monroe Twp.	Jackson Rd.	Gravel	4.20	30'	Contract	$8,690.00	$9,655.55
Monroe Twp.	Malaga Rd.	Gravel	3.61	30'	Contract	7,000.00	7,777.78
National Park Boro.	Girard Av. & 5th St.	Gravel	1.00	30'	Contract	3,070.00	3,411.10
National Park Boro.	N.J., Penna., Delaware Avs.	Gravel	1.00	30'	Contract	3,500.00	3,888.89
National Park Boro.	3rd St.	Gravel	.20	30'	FA	930.00	1,033.33
National Park Boro.	3rd St., Sec.#2 & 4th St.	Gravel	.85	30'	Contract	3,000.00	3,333.33
Newfield Boro.	Church, Rena, Helena, Pearl, Arch & Hazel Sts.	Gravel	2.00	30'	Contract	8,500.00	9,444.43
Paulsboro Boro.	Buck, Washington & various sts.	Gravel	2.20	26'	Contract	4,500.00	5,000.00
Paulsboro Boro.	5th St.	Plain Conc.	.42	20'	Contract	10,500.00	11,666.65
Pitman Boro.	Glen Lake Blvd., Highland Terrace, Brentwood Av.	FA-BC-1	1.11	20'	Contract	8,500.00	9,444.45
Pitman Boro.	Lake Av. & various sts.	FA-BC-1	2.62	20'	Contract	10,200.94	11,334.38
Pitman Boro.	Longmere Av. & various sts.	FA-BC-1	1.05	20'	Contract	7,500.00	8,333.33
Pitman Boro.	Wesley Av., Mansfield Av. & Blvd.	FA-BC-1	.64	20'	Contract	9,000.00	10,000.00
South Harrison Twp.	Harrisonville-Ferrell Rd., Sec.#1	Gravel	1.00	30'	Contract	2,800.00	3,111.11
South Harrison Twp.	Harrisonville-Ferrell Rd., Secs.#2 & #3	Gravel	2.00	30'	Contract	3,300.00	3,666.66
South Harrison Twp.	Pedricktown-Harrisonville	Gravel	.70	30'	Contract	2,660.00	2,955.56
South Harrison Twp.	Richwood-Harrisonville Rd., Sec.#4	Gravel	.40	30'	FA	1,400.00	1,555.55
Swedesboro Boro.	Chestnut St., Colon St. & Park Av. Extension	Gravel	.44	30'	Contract	4,000.00	4,444.44
Swedesboro Boro.	Merkling St. & South Av.	Gravel	.50	30'	Contract	4,000.00	4,444.44
Swedesboro Boro.	Merkling St., South Av., Richardson Av., Glass St.	Gravel	.75	30'	Contract	3,500.00	3,888.89
Washington Twp.	Eastview, Linwood & Edgewater, etc.	Gravel	1.10	30'	Contract	4,500.00	5,000.00
Washington Twp.	Fish Pond Rd. (Storm Damage Repair)	Gravel	2.19	30'	Contract	500.00	555.55
Wenonah Boro.	Poplar St. & S.Marion Av.	Drainage	.29	-	Contract	4,000.00	4,444.44
Wenonah Boro.	W.Cedar St. & S.W.Av., Sec. #2 & S.Marion Av.	Gravel	.42	30'	Contract	5,000.00	5,555.55

(continued on Sheet #11)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #11)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
	GLOUCESTER COUNTY (continued)						
Wenonah Boro.	Willow St., Cherry St., Sec.#2, & Poplar St., Sec.#2	Gravel	1.02	30'	Contract	$3,500.00	$3,888.88
Wenonah Boro.	W.Cedar St. & S.W.Av., Sec.#2, Cherry, Poplar Sts.	Gravel	.54	30'	Contract	3,500.00	3,888.89
West Deptford Twp.	5th, 6th, Manhattan Sts.	Gravel	.25	30'	Contract	900.00	1,000.00
West Deptford Twp.	Hillside, Walnut Sts., Shields & Lynn Avs.	Gravel	1.30	30'	Contract	4,500.00	5,000.00
West Deptford Twp.	Asbury, E.Columbia, Phila. & Walnut Avs.	Gravel	1.20	30'	Contract	4,400.00	4,888.89
West Deptford Twp.	Verga & Franklin Avs.	Gravel	.26	30'	FA	1,800.00	2,000.00
West Deptford Twp.	Wilson, Asbury, Columbia, etc.	Gravel	2.50	30'	Contract	4,500.00	5,000.00
Westville Boro.	Boundary Lane, Burr, Park & Delaware View Avs.	Gravel	.80	30'	Contract	2,750.00	3,055.55
Westville Boro.	Borough Av., Delaware View Av., Parkview Drive, Park Av.	Gravel	.64	30'	Contract	8,000.00	8,888.89
Westville Boro.	River Drive	Bit.Pen.Mac.	.50	20'	Contract	7,250.00	8,055.55
Westville Boro.	Summit & Highland Avs.	Gravel	1.06	30'	Contract	4,750.00	5,277.78
Woodbury City	W.Centre & E.Red Bank Av.	FA-BC-1	1.07	20'	Contract	7,500.00	8,333.33
Woodbury City	W.Barber, W.Centre & Tatum Sts.	FA-BC-1	1.19	20'	Contract	8,500.00	9,444.44
Woodbury City	Various sts.	FA-BC-1	3.70	20'	Contract	19,000.00	21,111.11
Woodbury City	Railroad Av.	FA-BC-1	.31	20'	Contract	11,077.68	12,308.53
Woodbury City	Tatum St.	Bit.Pen.Mac.	.09	20'	Contract	1,690.00	1,877.77
Woodbury Heights Boro.	4th St., Sec.#3	Gravel	.49	30'	Contract	2,500.00	2,777.78
Woodbury Heights Boro.	Lincoln & Spruce Avs.	Gravel	.47	30'	Contract	3,000.00	3,333.33
Woodbury Heights Boro.	Park & W.Jersey Avs.	Gravel	.95	30'	Contract	3,000.00	3,333.33
Woolwich Twp.	Back Creek Rd.	Gravel	1.85	30'	Contract	9,000.00	9,999.99
Woolwich Twp.	Kelley Rd.	Gravel	1.00	30'	FA	3,600.00	4,000.00
Woolwich Twp.	Kelley Rd., Sec.#2	Gravel	.50	30'	FA	2,000.00	2,222.22
Woolwich Twp.	Kelley Rd., Sec.#3	Gravel	.35	30'	Contract	1,260.00	1,400.00
Woolwich Twp.	Moravian Church Rd.	Gravel	.50	30'	Contract	3,500.00	3,888.89
Woolwich Twp.	Pedricktown-Harrisonville Rd., Sec.#3	Gravel	.80	30'	Contract	535.00	594.44
Woolwich Twp.	Pedricktown-Harrisonville Rd., Sec.#4	Gravel	2.00	30'	Contract	2,740.00	3,044.44

(continued on Sheet #12)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #12)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Fund
		HUDSON COUNTY					
East Newark Boro.	Grant Av.	Plain Conc.	.22	30'	Contract	$23,760.00	$26,400.00
East Newark Boro.	John St.	Plain Conc.	.22	30'	Contract	20,000.00	22,222.22
Kearny Town	Jacobus Av.	Plain Conc.	.64	36'	Contract	45,000.00	50,000.00
Kearny Town	Pennsylvania Av.	Grading	.36	-	Contract	48,000.00	53,333.33
North Bergen Twp.	Granton Av.	Plain Conc.	.52	30'	Contract	14,010.47	15,567.20
North Bergen Twp.	Park Av.	Sheet Asphalt	.35	56'	Contract	25,000.00	27,777.78
Secaucus Town	John St.	Plain Conc.	.13	30'	Contract	25,000.00	27,777.78
Secaucus Town	7th St.	Grading	.30	-	Contract	35,000.00	38,888.89
Weehawken Twp.	Baldwin Av.	Plain Conc.	.09	42'	Contract	27,000.00	30,000.00
Weehawken Twp.	Park Av., Sec.#2	Reinf. Conc.	.50	55'	Contract	20,000.00	22,222.22
West New York Town	Palisade Av., Sec.#1	Sheet Asphalt	.91	30'	Contract	30,000.00	33,333.33
West New York Town	Park Av., Sec.#3	Plain Conc.	.42	36'	Contract	30,000.00	33,333.33
		HUNTERDON COUNTY					
Alexandria Twp.	Little York-Garrison Schoolhouse Rd.	Bit.Pen.Mac.	2.25	18'	Contract	4,000.00	4,444.44
Alexandria Twp.	Neilson's Cor.-Mechlin Cor.Rd., Sec.#1	Bit.Pen.Mac.	.89	18'	Contract	12,800.00	14,222.22
Bethlehem Twp.	Pattenburg-Norton Rd.	Bit.Pen.Mac.	.85	18'	Contract	5,000.00	5,555.55
Bethlehem Twp.	Pattenburg-Norton Rd., Sec.#2	Bit.Pen.Mac.	.85	18'	Contract	11,500.00	12,777.78
Bloomsbury Boro.	High, Valley, Garden Sts.	"A" or "T"	1.23	18'	Contract	4,000.00	4,444.44
Bloomsbury Boro.	Willow Av., Railroad Av., Gardner & Wilson Sts.	"A" or "T"	.98	18'	Contract	2,600.00	2,888.88
Clinton Twp.	Annandale-High Bridge, Sec.#3	Bit.Pen.Mac.	.30	18'	Contract	5,400.00	6,000.00
Clinton Twp.	Clinton-Hamden Rd.	Bit.Pen.Mac.	1.10	18'	Contract	20,250.00	22,500.00
Clinton Twp.	Stanton Station-Hamden	Bit.Pen.Mac.	1.10	18'	Contract	10,500.00	11,666.67
Delaware Twp.	Ringoes-Croton, Sec.#5	Bit.Pen.Mac.	3.50	18'	Contract	5,500.00	6,111.11
Delaware Twp.	Ringoes-Croton, Sec.#6	Bit.Pen.Mac.	3.00	18'	Contract	12,000.00	13,333.33
East Amwell Twp.	VanLiew's Cor.-Hopewell	Bit.Pen.Mac.	2.10	18'	Contract	35,000.00	38,888.88
Franklin Twp.	Quakertown-Oak Grove Grange Rd.	Bit.Pen.Mac.	.42	18'	Contract	19,500.00	21,666.66
Franklin Twp.	River Rd., Sec.#2	"A" or "T"	.13	18'	Contract	2,250.00	2,500.00

(continued on Sheet #13)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #13)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			HUNTERDON COUNTY (continued)				
Frenchtown Boro.	Barbertown Rd.	"A" or "T"	.40	18'	Contract	$2,250.00	$2,500.00
Frenchtown Boro.	Milford Rd.	"A" or "T"	.12	18'	Contract	2,250.00	2,500.00
Holland Twp.	Hawk Schoolhouse Rd.	Bit.Pen.Mac.	1.70	18'	Contract	4,000.00	4,444.44
Lambertville City	Elm,Church,George Sts.	"A" or "T"	.39	24'	Contract	6,649.37	7,388.19
Lambertville City	Hancock St.	Bit.Pen.Mac.	.30	18'	Contract	4,500.00	5,000.00
Lambertville City	Lambert,Delevan,Wilson Sts.	"A" or "T"	.44	20'	Contract	6,000.00	6,666.67
Lebanon Twp.	Califon-Changewater Rd.	Bit.Pen.Mac.	6.00	18'	Contract	38,500.00	42,777.78
Lebanon Twp.	Glen Gardner-Woodglen Rd.,Sec.#5	Bit.Pen.Mac.	.13	18'	Contract	2,250.00	2,500.00
Raritan Twp.	Flemington-Raeville,Sec. #1	Bit.Pen.Mac.	.27	18'	Contract	3,750.00	4,166.66
Raritan Twp.	Ringoes-Croton,Sec.#5	Bit.Pen.Mac.	2.50	18'	Contract	14,000.00	15,555.56
Readington Twp.	Pleasant Run-Centerville, Sec.#2	"A" or "T"	3.20	18'	Contract	14,000.00	15,555.55
Tewksbury Twp.	Cokesbury-Califon Rd., Sec.#2	Bit.Pen.Mac.	1.00	18'	Contract	19,000.00	21,111.11
Tewksbury Twp.	Oldwick-Pottersville Rd.	"A" or "T"	1.75	18'	Contract	6,000.00	6,666.67
Union Twp.	Clinton-Tunison's Cor. Rd.,Sec.#4	Bit.Pen.Mac.	1.60	18'	Contract	12,500.00	13,888.89
Union Twp.	Pattenburg-Norton,Sec.#2	Bit.Pen.Mac.	.30	18'	Contract	4,500.00	5,000.00
Union Twp.	Perryville-Mechlin Cor. Rd.,Sec.#2	Bit.Pen.Mac.	1.00	18'	Contract	5,400.00	6,000.00
West Amwell Twp.	Harbourton Rd.	"A" or "T"	1.10	18'	Contract	15,700.00	17,444.44
			MERCER COUNTY				
East Windsor Twp.	Cranbury Crossroad	Gravel	1.00	30'	Contract	5,700.00	6,333.33
Ewing Twp.	Federal City Rd.	Bit.Pen.Mac.	.80	20'	Contract	18,400.00	20,444.44
Ewing Twp.	Wilburtha Rd.,Sec.#2	Bit.Pen.Mac.	.29	20'	Contract	8,100.00	9,000.00
Hamilton Twp.	Bear Swamp Rd.,Sec.#2	Bit.Pen.Mac.	.91	20'	Contract	11,200.00	12,444.44
Hamilton Twp.	Extonville Rd.	Gravel	.95	26'	Contract	5,400.00	6,000.00
Hamilton Twp.	Newkirk Av.	"A" or "T"	.75	20'	Contract	16,200.00	18,000.00
Hamilton Twp.	Park Av. & Central Av.	"A" or "T"	.75	20'	Contract	12,000.00	13,333.33
Hamilton Twp.	Pennsylvania Av.	Bit.Pen.Mac.	.85	20'	Contract	16,000.00	17,777.78

(continued on Sheet #14)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #15)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			MERCER COUNTY (continued)				
Hopewell Twp.	Harbourton-Rocktown Rd.	Bit.Pen.Mac.	.61	18'	Contract	$13,000.00	$14,444.44
Hopewell Twp.	Moore's Sta.-Ackor's Cor. Rd.,Sec.#5	Bit.Pen.Mac.	.27	18'	Contract	8,100.00	9,000.00
Hopewell Twp.	Moore's Sta.-Ackor's Cor. Rd.,Sec.#6	Bit.Pen.Mac.	.30	18'	Contract	9,000.00	10,000.00
Hopewell Twp.	Moore's Sta.-Ackor's Cor. Rd.,Sec.#7	Bit.Pen.Mac.	.60	18'	Contract	9,000.00	10,000.00
Hopewell Boro.	Seminary Av.	"A" or "T"	.14	20'	Contract	4,500.00	5,000.00
Lawrence Twp.	Princeton Tpke.,Sec.#4	Bit.Pen.Mac.	.58	20'	Contract	14,400.00	16,000.00
Lawrence Twp.	Princeton Pike,Sec.#5	Bit.Pen.Mac.	.50	20'	Contract	30,400.00	33,777.78
Pennington Boro.	Eglantine Av.	"A" or "T"	.32	20'	Contract	13,100.00	14,555.55
Princeton Twp.	Princeton Pike,Sec.#4	Bit.Pen.Mac.	.74	20'	Contract	21,833.94	24,259.93
Princeton Twp.	Witherspoon St. & Cherry Hill Rd.	Drainage	.39	-	Contract	4,500.00	5,000.00
Princeton Twp.	Witherspoon St.	Bit.Pen.Mac.	.36	20'	Contract	12,000.00	13,333.33
Princeton Boro.	Cleveland Lane,Sec.#2, & Boudinot St.	"A" or "T"	.50	20'	Contract	10,000.00	11,111.10
Princeton Boro.	Hamilton Av. Ext.,Harold Av.,Murray Pl.,Olden Av.	"A" or "T"	.70	20'	Contract	3,600.00	4,000.00
Princeton Boro.	Murray Pl.,Olden Av.,Wm. & Pine St.	"A" or "T"	.83	20'	Contract	3,600.00	4,000.00
Princeton Boro.	Spring St.	"A" or "T"	.10	20'	Contract	3,600.00	4,000.00
Washington Twp.	Robbinsville-Sharon,Sec.#8	Bit.Pen.Mac.	.39	18'	Contract	16,200.00	18,000.00
Washington Twp.	Robbinsville-Sharon, Sec.#8A	Bit.Pen.Mac.	.18	18'	Contract	4,500.00	5,000.00
Washington Twp.	Robbinsville-Sharon,Sec.#9	Bit.Pen.Mac.	.90	18'	Contract	13,500.00	15,000.00
West Windsor Twp.	Alexander Rd.,Sec.#3	Bit.Pen.Mac.	1.27	20'	Contract	16,000.00	17,777.78
West Windsor Twp.	Cranbury Neck Rd.	Bit.Soil Stab.	1.55	18'	Contract	11,700.00	13,000.00
			MIDDLESEX COUNTY				
Carteret Boro.	Hudson St. & Chrome Av.	Reinf.Conc.	.36	30'	Contract	16,000.00	17,777.78
Dunellen Boro.	Madison Av.	Reinf.Conc.	.60	20'	Contract	19,800.00	22,000.00
East Brunswick Twp.	Dutch Rd.	"A" or "T"	2.00	20'	Contract	8,000.00	8,888.88
East Brunswick Twp.	Dutch Rd.,Sec.#2	"A" or "T"	.75	20'	Contract	9,000.00	10,000.00
East Brunswick Twp.	Dutch Rd.,Sec.#3	"A" or "T"	.60	20'	Contract	9,000.00	10,000.00

(continued on Sheet #16)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #16)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			MIDDLESEX COUNTY (continued)				
East Brunswick Twp.	Dutch Rd., Sec. #4	"A" or "T"	.40	20'	Contract	$15,300.00	$17,000.00
Madison Twp.	Mundy Av. (Greystone Rd.)	Gravel	1.60	20'	Contract	5,425.00	6,027.77
Madison Twp.	Mundy Av. (Greystone Rd.), Sec. #2	Gravel	.76	20'	Contract	5,000.00	5,555.55
Middlesex Boro.	Mountain Av., Sec. #2A	"A" or "T"	.27	20'	Contract	6,075.00	6,750.00
Middlesex Boro.	Warrenville Rd.	"A" or "T"	.50	20'	Contract	9,000.00	10,000.00
Monroe Twp.	Cranbury Sta.-Wyckoff's Mills & Halsey Reed Rds.	Gravel	1.77	26'	Contract	8,100.00	9,000.00
Piscataway Twp.	South Randolphville Rd.	"A" or "T"	1.23	20'	Contract	14,350.00	15,944.45
Plainsboro Twp.	St. Josephs College Rd.	"A" or "T"	1.00	18'	Contract	19,000.00	21,111.11
Raritan Twp.	New Dover Rd., Sec. #1	"A" or "T"	.75	20'	Contract	4,500.00	5,000.00
Raritan Twp.	New Dover Rd., Sec. #2	"A" or "T"	.75	20'	Contract	9,000.00	10,000.00
Sayreville Boro.	Old Burlington Rd.	Gravel	1.00	20'	Contract	4,500.00	5,000.00
South Brunswick Twp.	Cottageville-Fresh Ponds Rd., Sec. #4	"A" or "T"	1.00	20'	Contract	8,200.00	9,111.11
South Brunswick Twp.	Cottageville-Fresh Ponds Rd., Sec. #5	"A" or "T"	1.00	20'	Contract	10,000.00	11,111.11
South Brunswick Twp.	Cottageville-Fresh Ponds Rd., Sec. #6	"A" or "T"	1.20	20'	Contract	10,000.00	11,111.11
South Brunswick Twp.	Cottageville-Fresh Ponds Rd., Sec. #7	"A" or "T"	.80	20'	Contract	16,800.00	18,666.67
South Plainfield Boro.	Hancock St.	"A" or "T"	.42	20'	Contract	9,000.00	10,000.00
South Plainfield Boro.	Central Av.	"A" or "T"	.23	20'	Contract	5,000.00	5,555.55
South Plainfield Boro.	Dumont Av.	"A" or "T"	.20	20'	Contract	4,500.00	5,000.00
South Plainfield Boro.	Firth St.	"A" or "T"	.25	20'	Contract	7,000.00	7,777.78
South Plainfield Boro.	Firth St., Central Av. & Clifford St.	Drainage	.30	-	Contract	6,300.00	7,000.00
			MONMOUTH COUNTY				
Atlantic Twp.	Hominy Hill Rd., Sec. #1	Gravel	1.08	26'	Contract	4,244.12	4,715.69
Atlantic Twp.	Woodland Dr. & Water St. & Hominy Hill Rd., Sec. #2	Gravel	2.50	26'	Contract	3,000.00	3,333.33
Atlantic Highlands Boro.	Hooper Av.	BST	.35	20'	Contract	2,700.00	3,000.00
Avon-by-the-Sea Boro.	First Av.	Gravel	.49	30'	Contract	3,000.00	3,333.33

(continued on Sheet #17)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #17)

MONMOUTH COUNTY (continued)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
Avon-by-the-Sea Boro.	1st,2nd,3rd & East End Avs.	BST	.72	42'	Contract	$4,300.00	$4,777.78
Belmar Boro.	2nd,3rd,7th,12th,15th Avs.	"A" or "T"	2.39	20'	Contract	2,700.00	3,000.00
Belmar Boro.	River Rd. & 16th Av.	"A" or "T"	1.21	20'	Contract	3,300.00	3,666.67
Bradley Beach Boro.	LaReine,McCabe,Park Place,4th	"A" or "T"	.55	20'	Contract	2,500.00	2,777.77
Brielle Boro.	Ashley Av.,Sec.#2 & Rankin Rd.,Sec.#2	Gravel	.42	30'	Contract	2,000.00	2,222.22
Brielle Boro.	Rankin Rd.,Sec.#2,Brown St., Ashley Av.,Sec.#2, & Barrie Av.	Gravel	1.00	30'	Contract	2,000.00	2,222.22
Eatontown Boro.	Whale Pond Rd.	Drainage	.70	-	Contract	2,700.00	3,000.00
Freehold Twp.	W.Freehold-Georgia School House Rd.,Sec.#4	Gravel	3.00	26'	Contract	6,400.00	7,111.11
Keyport Boro.	Beers St.,Sec.#2	Gravel	.17	30'	Contract	2,700.00	3,000.00
Manalapan Twp.	Englishtown-Tracy Station	Gravel	.60	26'	Contract	3,000.00	3,333.33
Manalapan Twp.	Gordon's Cor.-Englishtown	Gravel	1.80	26'	Contract	3,600.00	4,000.00
Manasquan Boro.	1st,Central,Clark & Riddle Way	"A" or "T"	.60	20'	Contract	3,600.00	4,000.00
Manasquan Boro.	Euclid Av.,Sec.#2, & Perrin Blvd.	Gravel	.70	30'	Contract	3,600.00	4,000.00
Matawan Boro.	Mill Rd.	Gravel	.26	26'	Contract	1,000.00	1,111.11
Matawan Twp.	Church St.	Gravel	1.10	26'	Contract	6,150.00	6,833.33
Middletown Twp.	Everett Rd.	Gravel	1.62	26'	Contract	8,900.00	9,888.89
Millstone Twp.	Perrineville-Jamesburg Rd.	Gravel	2.10	26'	Contract	3,600.00	4,000.00
Neptune Twp.	Stratford,Milton,Hawthorne, MacBride & Columbus Avs.	Gravel	1.09	26'	Contract	4,500.00	5,000.00
Ocean Twp.	Logan Rd.	MIP-BST	.39	24'	Contract	3,000.00	3,333.33
Oceanport Boro.	Port-au-Peck Av.	Gravel	.50	30'	Contract	2,400.00	2,666.66
Oceanport Boro.	Wolf Hill Av.	"A" or "T"	.43	30'	Contract	3,000.00	3,333.33
Raritan Twp.	Bethany Rd.,Sec.#2, & Beers St.	BST	1.85	26'	Contract	2,700.00	3,000.00
Sea Girt Boro.	Baltimore Blvd. & 5th Av., Sec.#2	Gravel	.19	30'	Contract	2,000.00	2,222.22
Shrewsbury Twp.	Riverdale Rd.	Gravel	1.50	26'	Contract	6,100.00	6,777.78
Shrewsbury Twp.	West Park Av.	Gravel	1.30	20'	Contract	2,500.00	2,777.77

(continued on Sheet #18)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #18)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
MONMOUTH COUNTY (continued)							
Spring Lake Boro.	Newark, Tuttle, Monroe & St.Clair Avs.	BST	1.15	20'	Contract	$2,000.00	$2,222.22
Spring Lake Boro.	Pitney, St.Clair & 4th Avs.	Gravel	2.11	30'	Contract	2,700.00	3,000.00
Spring Lake Boro.	Worthington, Vroom, Pitney & Salem Avs.	Gravel	2.00	20'	Contract	2,000.00	2,222.22
Spring Lake Hghts.Boro.	Ocean Rd.	"A" or "T"	.02	20'	Contract	1,000.00	1,111.11
Upper Freehold Twp.	Extonville Rd.	Gravel	1.00	30'	Contract	5,400.00	6,000.00
Upper Freehold Twp.	Polhemustown-New Egypt Rd.	Gravel	1.70	26'	Contract	6,600.00	7,333.33
Wall Twp.	Allenwood-Lakewood Rd.	Gravel	1.10	30'	Contract	3,600.00	4,000.00
Wall Twp.	Lakewood Rd. & Bailey's Cor.-Glendola Rd.	Gravel	3.65	30'	Contract	4,050.00	4,500.00
Wall Twp.	Hurley Pond-Farmingdale Rd., Sec.#2	Gravel	1.69	30'	Contract	4,000.00	4,444.44
West Long Branch Boro.	Whale Pond Rd.	Drainage	.70	-	Contract	2,700.00	3,000.00
MORRIS COUNTY							
Boonton Twp.	Meriden Rd.	Bit.Pen.Mac.	1.00	20'	Contract	15,300.00	17,000.00
Chatham Twp.	River Rd., Sec.#1	Type "A"	.26	20'	Contract	9,000.00	10,000.00
Denville Twp.	Franklin Av., Sec.#1	"A" or "T"	1.00	20'	Contract	7,500.00	8,333.33
Denville Twp.	Franklin Av., Sec.#2	"A" or "T"	1.00	20'	Contract	18,000.00	20,000.00
Florham Park Boro.	Roosevelt Blvd., Sec.#2	"A" or "T"	.40	18'	Contract	10,400.00	11,555.55
Harding Twp.	Basking Ridge-New Vernon Rd., Sec.#5	"A" or "T"	1.00	20'	Contract	10,200.00	11,333.33
Kinnelon Boro.	Jacksonville Rd.	Bit.Pen.Mac.	1.00	18'	Contract	9,800.00	10,888.89
Lincoln Park Boro.	Morris Canal Rd.	Bit.Pen.Mac.	.40	20'	Contract	4,500.00	5,000.00
Mine Hill Twp.	Randall Av.	Bit.Pen.Mac.	1.00	18'	Contract	25,600.00	28,444.44
Morris Plains Boro.	Malapardis Rd.	"A" or "T"	.41	20'	Contract	12,300.00	13,666.66
Mount Olive Twp.	Bartley-Drakestown Rd.	Bit.Pen.Mac.	1.10	18'	Contract	12,600.00	14,000.00
Parsippany-Troy Hills Twp.	Edwards Rd.	"A" or "T"	.80	18'	Contract	3,600.00	4,000.00
Passaic Twp.	Long Hill Rd., Sec.#2	"A" or "T"	.31	18'	Contract	9,000.00	10,000.00
Passaic Twp.	Long Hill Rd., Sec.#4	"A" or "T"	.87	18'	Contract	21,600.00	24,000.00
Randolph Twp.	Millbrook Av.	Bit.Pen.Mac.	.55	18'	Contract	9,000.00	10,000.00
Riverdale Boro.	Mathews Rd.	Bit.Pen.Mac.	.50	20'	Contract	2,000.00	2,222.22

(continued on Sheet #19)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #19)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			MORRIS COUNTY (continued)				
Riverdale Boro.	Mathews Rd., Sec. #2	Bit.Pen.Mac.	.50	20'	Contract	$15,600.00	$17,333.33
Rockaway Boro.	Franklin Av., Sec. #2	"A" or "T"	.50	20'	Contract	9,000.00	10,000.00
Rockaway Boro.	Franklin Av., Sec. #3	"A" or "T"	.17	20'	Contract	5,000.00	5,555.56
Washington Twp.	Bartley-Drakestown Rd.	Bit.Pen.Mac.	1.10	18'	Contract	12,600.00	14,000.00
			OCEAN COUNTY				
Barnegat City Boro.	18th & 19th Sts.	Gravel	.27	30'	Contract	2,000.00	2,222.22
Barnegat City Boro.	12th St.	Gravel	.21	30'	Contract	2,160.00	2,400.00
Barnegat City Boro.	27th St.	Gravel	.25	30'	Contract	1,500.00	1,666.67
Beachwood Boro.	Cable Av.	Gravel	.65	30'	Contract	2,700.00	3,000.00
Beachwood Boro.	Capstan Av.	Gravel	.80	30'	Contract	2,000.00	2,222.22
Beachwood Boro.	Pennant, Neptune, Mermaid & Longboat Avs.	Gravel	1.10	30'	Contract	2,700.00	3,000.00
Beachwood Boro.	Spar & Anchor Avs.	Gravel	2.00	30'	Contract	2,700.00	3,000.00
Beachwood Boro.	Seaman Av.	Gravel	1.30	30'	Contract	2,700.00	3,000.00
Berkeley Twp.	Harbor Inn Rd. & Brennan Concourse	Gravel	1.83	30'	Contract	4,000.00	4,444.44
Brick Twp.	Beacon, Linden, Manchester, Coon Rds., Elizabeth Av.	Gravel	3.10	30'	Contract	9,500.00	10,555.55
Brick Twp.	Midstreams Rd.	Gravel	1.75	30'	Contract	4,000.00	4,444.44
Brick Twp.	Pine St. & Havens Cove Rd.	Gravel	.75	30'	Contract	4,500.00	5,000.00
Dover Twp.	Riverside Dr., Magnolia Av. & Hickory St.	Gravel	1.11	30'	Contract	4,500.00	5,000.00
Dover Twp.	Schencks Mill Line Rd., Alabama & Buermann Avs.	Gravel	2.15	30'	Contract	9,500.00	10,555.55
Dover Twp.	Waldron, Gary & Green Island Rds.	Gravel	1.44	30'	Contract	4,000.00	4,444.44
Dover Twp.	White Oak Bottom Rd. & Barnegat Blvd.	Gravel	2.70	30'	Contract	4,015.64	4,461.82
Eagleswood Twp.	Cemetery Lane	Gravel	.09	30'	Contract	675.00	750.00
Eagleswood Twp.	Cox Crossing-Stafford Forge Rd.	Gravel	1.00	30'	Contract	1,800.00	2,000.00
Eagleswood Twp.	John St., Sec. #2, Willits Av., Sec. #2, & R.R. Av.	Gravel	.22	30'	Contract	1,200.00	1,333.33

(continued on Sheet #20)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #20)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			OCEAN COUNTY (continued)				
Harvey Cedars Boro.	Holly & Union Avs.	Gravel	.19	30'	Contract	$1,500.00	$1,666.67
Harvey Cedars Boro.	Bergen Av., 81st & Anchor Sts.	Gravel	.25	30'	Contract	600.00	666.67
Jackson Twp.	Bowman Rd.	Gravel	.70	26'	Contract	3,100.00	3,444.44
Lacey Twp.	Lenoka-Lacey Rd. Cut-off, Sec.#2	Gravel	1.00	26'	Contract	4,000.00	4,444.44
Lacey Twp.	Lenoka-Lacey Rd. Cut-off, Sec.#3	Gravel	1.00	26'	Contract	2,700.00	3,000.00
Lacey Twp.	Lenoka-Lacey Rd. Cut-off, Sec.#4	Gravel	1.50	26'	Contract	2,700.00	3,000.00
Lacey Twp.	Newark & Letts Avs.	Gravel	.59	30'	Contract	2,700.00	3,000.00
Lakewood Twp.	South Lake Drive, Sec.#2	Gravel	1.55	26'	Contract	5,400.00	6,000.00
Lakewood Twp.	Spruce St., Sec.#2	Gravel	.43	30'	Contract	2,600.00	2,888.89
Lakewood Twp.	VanBuren Av. & Adams St.	Gravel	.27	30'	Contract	1,400.00	1,555.56
Long Beach Twp.	Beach Av., Sec.#2	Gravel	.57	30'	FA	4,000.00	4,444.44
Manchester Twp.	Burnside St., Lawrence Av. & Hampton Av.	Gravel	1.00	30'	Contract	2,700.00	3,000.00
Manchester Twp.	Cedar Bridge-Whiting Rd.	Gravel	3.00	30'	Contract	14,000.00	15,555.55
Manchester Twp.	Morningside Av., Sec.#2, & 10th Av.	Gravel	.50	30'	Contract	3,600.00	4,000.00
Ocean Twp.	Oregon Av., Dock Rd., Walnut St., Maple, Pine Av.	Gravel	.56	30'	Contract	2,500.00	2,777.77
Ocean Twp.	Waretown-Wells Mills Rd.	Gravel	4.30	26'	Contract	7,265.00	8,072.22
Ocean Twp.	Wells Mills-Warren Grove Rd.	Gravel	1.50	30'	Contract	4,000.00	4,444.44
Ocean Gate Boro.	Stone Harbor, Wildwood & Newport Avs.	Conc. Bulkhead	-	-	Contract	2,700.00	3,000.00
Pine Beach Boro.	Monmouth, Hillside, N.J. Avs.	Gravel	.26	30'	Contract	1,500.00	1,666.66
Pine Beach Boro.	Riverside Drive	Tr. Timber Bulkhead	-	-	Contract	4,000.00	4,444.44
Plumsted Twp.	Big Woods (Archertown) Rd.	Gravel	1.75	30'	Contract	7,200.00	8,000.00
Plumsted Twp.	Hopkins Rd., Sec.#2	Gravel	.60	26'	Contract	2,700.00	3,000.00
Point Pleasant Boro.	Austin, Cottage, Grove & various sts.	Gravel	.98	30'	Contract	3,090.00	3,433.33

(continued on Sheet #21)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #21)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			OCEAN COUNTY (continued)				
Point Pleasant Boro.	Pine Bluff, Davis & Morris Avs.	Gravel	.80	30'	Contract	$2,700.00	$3,000.00
Point Pleasant Beach Boro.	Harvard Av., Riverside & Fairview Place	Gravel	.48	30'	Contract	3,600.00	4,000.00
Point Pleasant Beach Boro.	Hawthorne Av., River Blvd. & Niblick St.	Gravel	.51	30'	Contract	1,238.67	1,376.30
Point Pleasant Beach Boro.	Hawthorne Av. & various sts.	Gravel	.87	30'	Contract	2,700.00	3,000.00
Point Pleasant Beach Boro.	New York Av.	Gravel	.34	30'	Contract	2,700.00	3,000.00
Seaside Heights Boro.	Barnegat Av.	Gravel	.30	30'	Contract	2,700.00	3,000.00
Seaside Heights Boro.	Barnegat Av., Sec.#2	Gravel	.27	30'	Contract	1,000.00	1,111.11
Seaside Heights Boro.	Sampson Av., Sec.#2	Gravel	.08	30'	Contract	800.00	888.89
Seaside Heights Boro.	W.Central & Carteret Avs.	Gravel	.33	30'	Contract	2,700.00	3,000.00
Seaside Park Boro.	14th Av.	Gravel	.14	30'	FA	900.00	1,000.00
Ship Bottom Boro.	3rd St. & Central Av.	Gravel	.26	30'	Contract	1,800.00	2,000.00
Ship Bottom Boro.	22nd & 23rd Sts.	Gravel	.27	36'	FA	1,800.00	2,000.00
Surf City Boro.	Central Av. & S.3rd St.	Gravel	.35	30'	Contract	2,700.00	3,000.00
Union Twp.	Cedar Bridge-Whiting Rd.	Gravel	2.05	30'	Contract	11,000.00	12,222.21
Union Twp.	Wells Mills-Warren Grove Rd.	Gravel	1.10	30'	Contract	3,600.00	4,000.00
			PASSAIC COUNTY				
Bloomingdale Boro.	Catherine & Warren Sts.	Bit.Pen.Mac.	.27	20'	Contract	6,500.00	7,222.22
Bloomingdale Boro.	Mary, Elizabeth Sec.#2, William & Sophia Sts.	Bit.Pen.Mac.	.29	20'	Contract	11,500.00	12,777.77
Bloomingdale Boro.	Oak St. & Reeve Av.	"A" or "T"	.34	20'	Contract	6,000.00	6,666.67
Haledon Boro.	Ida & N. 16th Sts.	"A" or "T"	.14	30'	Contract	3,000.00	3,333.33
Haledon Boro.	N. 15th St.	Bit.Pen.Mac.	.17	20'	Contract	3,500.00	3,888.89
Hawthorne Boro.	Fairview Av.	"A" or "T"	.24	20'	Contract	13,000.00	14,444.44
Hawthorne Boro.	Grandview Av.	Bit.Pen.Mac.	.19	20'	Contract	5,700.00	6,333.33
Hawthorne Boro.	Royal Av., Sec.#2	"A" or "T"	.13	30'	Contract	8,300.00	9,222.21
Little Falls Twp.	1st, 2nd & Grove Sts.	Bit.Pen.Mac.	.34	20'	Contract	6,500.00	7,222.22
Little Falls Twp.	3rd, Grove, Wood Sts., Dewey & Bradford Avs.	Bit.Pen.Mac.	.27	20'	Contract	4,000.00	4,444.44
North Haledon Boro.	Linda Vista Av., Sec.#2	Bit.Pen.Mac.	.42	20'	Contract	6,000.00	6,666.67

(continued on Sheet #22)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #22)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			PASSAIC COUNTY (continued)				
North Haledon Boro.	Manchester Av. (Widening)	Bit.Pen.Mac.	.33	10'	Contract	$9,500.00	$10,555.56
North Haledon Boro.	Rothesay Av.	Bit.Pen.Mac.	.19	20'	Contract	4,000.00	4,444.44
North Haledon Boro.	Westervelt Av.	Bit.Pen.Mac.	.39	20'	Contract	6,500.00	7,222.22
Pompton Lakes Boro.	Dawes Highway	Bit.Pen.Mac.	.12	20'	Contract	2,500.00	2,777.78
Pompton Lakes Boro.	Lincoln Av., Sec.#2	Bit.Pen.Mac.	.82	20'	Contract	12,000.00	13,333.33
Pompton Lakes Boro.	Riverdale Blvd.	Bit.Pen.Mac.	.40	20'	Contract	4,000.00	4,444.44
Prospect Park Boro.	Brown Av., Sec.#2	FA-BC-1	.25	20'	Contract	8,000.00	8,888.88
Prospect Park Boro.	North 13th St.	"A" or "T"	.17	30'	Contract	5,000.00	5,555.55
Ringwood Boro.	Burnt Meadow Rd.	Bit.Pen.Mac.	.90	20'	Contract	6,000.00	6,666.67
Ringwood Boro.	Snake Den & Dale Rds.	Bit.Pen.Mac.	1.00	20'	Contract	8,500.00	9,444.44
Ringwood Boro.	Stonetown Rd.	Bit.Pen.Mac.	4.00	20'	Contract	12,250.00	13,611.11
Totowa Boro.	Crews St.	Bit.Pen.Mac.	.09	20'	Contract	1,000.00	1,111.11
Totowa Boro.	Crosby Av.	Bit.Pen.Mac.	.18	20'	Contract	2,600.00	2,888.88
Totowa Boro.	Hudson & Mitchell Avs.	Bit.Pen.Mac.	.39	20'	Contract	6,500.00	7,222.22
Totowa Boro.	Lind Av.	Bit.Pen.Mac.	.23	20'	Contract	3,700.00	4,111.11
Totowa Boro.	Tracey Av., Sec.#2	Bit.Pen.Mac.	.04	20'	Contract	1,000.00	1,111.11
Totowa Boro.	Wilson Av. & Dunkerly St.	Bit.Pen.Mac.	.33	20'	Contract	9,700.00	10,777.77
Wanaque Boro.	Greenwood Av.	Bit.Pen.Mac.	.90	20'	Contract	3,500.00	3,888.89
Wanaque Boro.	Greenwood Av., Sec.#2	Bit.Pen.Mac.	.50	20'	Contract	5,000.00	5,555.55
Wayne Twp.	Hardwick Lane, Sec.#2	Bit.Pen.Mac.	.25	20'	Contract	7,000.00	7,777.77
Wayne Twp.	Hinchman's Lane	Bit.Pen.Mac.	.64	20'	Contract	13,000.00	14,444.44
Wayne Twp.	Oakwood Dr. & Peninsula Dr.	Bit.Pen.Mac.	.23	20'	Contract	6,500.00	7,222.22
West Milford Twp.	Morsetown Rd.	Bit.Pen.Mac.	.66	20'	Contract	10,000.00	11,111.10
West Milford Twp.	West Brook Rd., Sec.#3	Bit.Pen.Mac.	.33	20'	Contract	7,500.00	8,333.33
West Milford Twp.	West Brook Rd., Sec.#4	Bit.Pen.Mac.	.66	20'	Contract	21,000.00	23,333.33
West Paterson Boro.	Providence Av. & W.36th St.	"A" or "T"	.25	20'	Contract	4,500.00	5,000.00
West Paterson Boro.	W.32nd St., Marcellus Av., W.34th & W.35th Sts.	"A" or "T"	.44	20'	Contract	8,500.00	9,444.44
West Paterson Boro.	Whippany & Ramapo Avs.	"A" or "T"	.14	24-30'	Contract	2,500.00	2,777.78
West Paterson Boro.	Pompton Av.	"A" or "T"	.20	24-30'	Contract	5,000.00	5,555.55
			SALEM COUNTY				
Elmer Boro.	Barton Av. & Penn St.	Gravel	.30	30'	FA	2,000.00	2,222.22
Elmer Boro.	Elmer St.	Gravel	.23	30'	FA	2,000.00	2,222.22

(continued on Sheet #23)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #23)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			SALEM COUNTY (continued)				
Elmer Boro.	4th St. (paving)	FA-BC-1	.20	20'	Contract	$3,600.00	$4,000.00
Elsinboro Twp.	Acton Farm Rd.	Gravel	.93	26'	Contract	5,000.00	5,555.55
Elsinboro Twp.	Feather Bed Lane	Gravel	1.20	30'	Contract	5,400.00	6,000.00
Lower Alloways Creek Twp.	Buckhorn Rd., Sec.#1	Gravel	.80	26'	Contract	5,400.00	6,000.00
Lower Alloways Creek Twp.	Cross Rd., Sec.#2	Gravel	.68	26'	FA	6,300.00	7,000.00
Lower Alloways Creek Twp.	Maple Av., New & 2nd Sts.	Gravel	.60	26'	Contract	4,000.00	4,444.44
Lower Penns Neck Twp.	Glen Dr., Annapolis Rd. & Francis Dr.	Gravel	.26	26'	FA	1,440.00	1,600.00
Lower Penns Neck Twp.	Holly Dr., Michigan Rd. & Maple Dr.	Gravel	.27	26'	FA	1,530.00	1,700.00
Lower Penns Neck Twp.	Spruce & Zane Sts.	Gravel	.26	30'	FA	900.00	1,000.00
Penns Grove Boro.	N.Smith Av., Sec.#1&2 & E.Harmony St., Sec.#1&2 (paving)	Bit.Conc.	.35	20'	Contract	8,000.00	8,888.89
Penns Grove Boro.	S.Smith Av.	"A" or "T"	.30	20'	Contract	1,250.00	1,388.88
Penns Grove Boro.	S.Smith Av., Sec.#2, & Park Av.	Gravel	.82	30'	Contract	3,700.00	4,111.11
Pilesgrove Twp.	Harding Hwy.-Harrisonville Rd., Sec.#3	Gravel	1.80	26'	Contract	10,800.00	12,000.00
Pittsgrove Twp.	Bramble Rd.	Gravel	1.10	26'	Contract	5,400.00	6,000.00
Quinton Twp.	Burden Hill Rd.	Gravel	3.10	26'	Contract	8,100.00	9,000.00
Quinton Twp.	Cool Run Rd.	Gravel	.25	26'	Contract	1,800.00	2,000.00
Quinton Twp.	Cream Ridge Rd.	Gravel	.50	26'	Contract	2,700.00	3,000.00
Quinton Twp.	Hogate Blvd.	Gravel	.80	26'	Contract	4,500.00	5,000.00
Salem City	5th St.	FA-BC-1	.15	20'	Contract	6,300.00	7,000.00
Salem City	9th St.	FA-BC-1	.27	20'	Contract	7,200.00	8,000.00
Upper Penns Neck Twp.	Highland Rd.	Gravel	.34	27'	Contract	3,150.00	3,500.00
Upper Penns Neck Twp.	Miller Av.	Gravel	.35	30'	Contract	1,750.00	1,944.44
Upper Pittsgrove Twp.	Cedar Lane Rd.	Gravel	1.00	26'	Contract	1,400.00	1,555.56
Upper Pittsgrove Twp.	Fitch Horn Rd.	Gravel	.80	26'	Contract	5,000.00	5,555.55
Upper Pittsgrove Twp.	Fox Mill Rd.	Gravel	.90	26'	Contract	4,500.00	5,000.00
Upper Pittsgrove Twp.	Sawmill Rd.	Gravel	.83	26'	Contract	4,500.00	5,000.00
Woodstown Boro.	Bowen Av.	FA-BC-1	.18	20'	Contract	2,000.00	2,222.22

(continued on Sheet #24)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #24)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			SOMERSET COUNTY				
Bedminster Twp.	Pluckemin-Burnt Mills Rd., Sec.#5	"A" or "T"	.70	20'	Contract	$27,250.00	$30,277.77
Bound Brook Boro.	W.High St. & Thompson Av.	Reinf.Conc.	.43	20'	Contract	9,000.00	10,000.00
Branchburg Twp.	Opie Rd.,Sec.#1	"A" or "T"	1.30	20'	Contract	17,800.00	19,777.77
Bridgewater Twp.	W.High St.,Sec.#2	"A" or "T"	.35	20'	Contract	8,100.00	9,000.00
Franklin Twp.	Cedar Grove Lane,Sec.#1	"A" or "T"	.26	20'	Contract	7,000.00	7,777.77
Franklin Twp.	Cedar Grove Lane,Sec.#2	"A" or "T"	.75	20'	Contract	7,000.00	7,777.77
Franklin Twp.	Cedar Grove Lane,Sec.#3	"A" or "T"	.75	20'	Contract	6,300.00	7,000.00
Franklin Twp.	Cedar Grove Lane,Sec.#4	"A" or "T"	.75	20'	Contract	18,000.00	20,000.00
Green Brook Twp.	Gold St.,Sec.#2, & Cramer Av.	"A" or "T"	.34	20'	Contract	6,500.00	7,222.22
Hillsborough Twp.	New Centre Schoolhouse Rd., Sec.#4	"A" or "T"	1.25	20'	Contract	7,500.00	8,333.33
Hillsborough Twp.	New Centre Schoolhouse Rd., Sec.#5	"A" or "T"	1.00	20'	Contract	13,000.00	14,444.44
Hillsborough Twp.	New Centre Schoolhouse Rd., Sec.#6	"A" or "T"	1.00	20'	Contract	18,000.00	20,000.00
Montgomery Twp.	Hollow Rd.,Sec.#2	"A" or "T"	2.50	20'	Contract	10,000.00	11,111.11
Montgomery Twp.	Hollow Rd.,Sec.#3	"A" or "T"	2.00	20'	Contract	10,800.00	12,000.00
Montgomery Twp.	Hollow Rd.,Sec.#4	"A" or "T"	1.50	20'	Contract	18,770.00	20,855.55
South Bound Brook Boro.	Louis Av.,Sec.#2	"A" or "T"	1.30	20'	Contract	2,731.15	3,034.60
Warren Twp.	Mount Horeb Rd.,Sec.#2	Type "T"	.69	20'	Contract	19,600.00	21,777.77
Watchung Boro.	Hillcrest Rd.	"A" or "T"	.76	20'	Contract	20,100.00	22,333.33
			SUSSEX COUNTY				
Andover Twp.	Huntsville-Springdale Rd.	Gravel	1.00	18'	Contract	7,500.00	8,333.33
Andover Twp.	Limecrest Rd.,Sec.#1	Gravel	.30	26'	Contract	9,000.00	10,000.00
Branchville Boro.	Kemah Lake Rd.	BST	.12	20'	Contract	3,000.00	3,333.33
Branchville Boro.	Mattison Av.	Gravel	.75	18'	Contract	4,000.00	4,444.44
Byram Twp.	Old Stanhope Rd.,Sec.#2	Gravel	1.00	18'	Contract	5,000.00	5,555.55
Frankford Twp.	County Farm Rd.,Sec.#2	Gravel	1.80	18'	Contract	7,000.00	7,777.77
Frankford Twp.	Orrin Losey Rd.	Gravel	.75	26'	Contract	4,000.00	4,444.44
Frankford Twp.	Plains Rd.,Sec.#2 & #3	Gravel	2.92	18'	Contract	16,000.00	17,777.77
Franklin Boro.	Davis Rd.	Gravel	1.50	18'	Contract	8,000.00	8,888.88
Franklin Boro.	Davis Rd.,Sec.#2	Gravel	1.25	26'	Contract	15,000.00	16,666.66
Fredon Twp.	Anderson Hill Rd.	Gravel	1.00	18'	Contract	4,000.00	4,444.44

(continued on Sheet #25)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #25)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Fund
			SUSSEX COUNTY (continued)				
Fredon Twp.	Fredon-Springdale Rd., Sec. #3	Gravel	1.50	18'	Contract	$6,300.00	$7,000.00
Fredon Twp.	Fredon-Springdale Rd., Sec. #4	Gravel	.75	18'	Contract	5,000.00	5,555.55
Fredon Twp.	Old Swartswood Rd.	Gravel	.50	18'	Contract	2,000.00	2,222.22
Green Twp.	Huntsville-Springdale Rd.	Gravel	1.26	18'	Contract	10,000.00	11,111.11
Green Twp.	Shotwell Rd., Sec. #2	Gravel	.15	18'	FA	1,309.29	1,454.77
Green Twp.	Shotwell Rd., Sec. #3	Gravel	.13	18'	Contract	4,000.00	4,444.44
Hamburg Boro.	Linwood Av., Sec. #4, Lehigh, Hamilton, Lawrence Sts.	Gravel	.25	26'	Contract	5,000.00	5,555.56
Hamburg Boro.	Oak St.	Bit.Pen.Mac.	.40	18'	Contract	5,000.00	5,555.56
Hampton Twp.	Myrtle Grove-Lake Kemah Rd., Sec. #4, & Mecca Lake Rd.	Gravel	2.40	18'	Contract	6,000.00	6,666.67
Hampton Twp.	Myrtle Grove-Lake Kemah Rd., Sec. #5, & Mecca Lake Rd.	Gravel	2.00	26'	Contract	11,000.00	12,222.22
Hampton Twp.	Old Swartswood Rd.	Gravel	.60	18'	Contract	2,000.00	2,222.22
Hampton Twp.	Paulinskill Lake-W. Shore Rd.	Gravel	1.00	18'	Contract	5,000.00	5,555.56
Hardyston Twp.	Big Spring Rd., Sec. #2	Gravel	3.00	18'	Contract	4,000.00	4,444.44
Hardyston Twp.	Big Spring Rd., Sec. #3	Gravel	1.00	18'	Contract	4,000.00	4,444.44
Lafayette Twp.	Ice Plant Rd.	Gravel	.25	18'	Contract	1,500.00	1,666.67
Lafayette Twp.	Limecrest Rd.	Gravel	.33	18'	Contract	5,000.00	5,555.56
Lafayette Twp.	Sunset Inn-Limecrest Rd., Sec. #2	Gravel	1.50	18'	Contract	6,000.00	6,666.67
Lafayette Twp.	Sunset Inn-Limecrest Rd., Sec. #3	Gravel	1.50	18'	Contract	5,000.00	5,555.55
Lafayette Twp.	Statesville Quarry Rd.	Gravel	1.50	18'	Contract	4,000.00	4,444.44
Montague Twp.	Deckertown Turnpike	Gravel	1.00	26'	Contract	5,000.00	5,555.56
Montague Twp.	New Rd., Sec. #4	Gravel	1.00	18'	Contract	5,000.00	5,555.55
Montague Twp.	New Rd., Sec. #5	Gravel	1.50	18'	Contract	5,000.00	5,555.55
Newton Town	Halsted St.	Bit.Pen.Mac.	.17	24'	Contract	9,000.00	10,000.00
Sandyston Twp.	Shaytown Cemetery Rd., Sec. #2	Gravel	.50	18'	FA	5,000.00	5,555.56
Sparta Twp.	Limecrest Rd., Sec. #3	Gravel	.37	26'	Contract	9,000.00	10,000.00
Sparta Twp.	Old Stanhope Rd., Secs. #1&2	Gravel	2.46	18'	Contract	12,500.00	13,888.88
Sparta Twp.	White Lake Rd.	Gravel	1.50	18'	Contract	6,000.00	6,666.67
Stanhope Boro.	Bell St. & Bedford Av.	Bit.Pen.Mac.	.17	20'	Contract	3,000.00	3,333.33

(continued on Sheet #26)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #26)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			SUSSEX COUNTY (continued)				
Stanhope Boro.	Musconetcong Av. Ext.	Bit.Pen.Mac.	.47	18'	Contract	$4,000.00	$4,444.44
Stillwater Twp.	Five Points-Middleville Rd.	Gravel	2.00	18'	Contract	6,000.00	6,666.67
Stillwater Twp.	Five Points-Middleville Rd.,Sec.#2	Gravel	1.50	26'	Contract	13,500.00	15,000.00
Stillwater Twp.	Hampden-Mount Benevolence Rd.,Sec.#2	Gravel	.60	26'	FA	4,000.00	4,444.44
Stillwater Twp.	Station Rd.	Gravel	.25	18'	Contract	3,600.00	4,000.00
Sussex Boro.	Lakeshore Drive	Gravel	.30	20'	FA	3,000.00	3,333.33
Sussex Boro.	Liberty,Munson,Walnut & 4th Sts.	Bit.Pen.Mac.	.50	25'	Contract	4,000.00	4,444.44
Sussex Boro.	Munson & Walnut Sts.	Bit.Pen.Mac.	.75	20'	Contract	3,000.00	3,333.33
Vernon Twp.	Highland Lakes-Canisteer Rd.,Sec.#2	Gravel	1.00	26'	Contract	16,000.00	17,777.77
Vernon Twp.	Owens Station Rd.	Gravel	2.00	18'	Contract	10,000.00	11,111.11
Vernon Twp.	Sand Hill Rd.,Sec.#2	Gravel	1.90	18'	Contract	6,000.00	6,666.67
Walpack Twp.	River Rd.,Sec.#5	Gravel	1.56	18'	Contract	27,473.28	30,525.86
Walpack Twp.	River Rd.,Sec.#6	Gravel	4.00	18'	Contract	11,900.00	13,222.22
Wantage Twp.	Mount Salem-Unionville Rd.,Sec.#3	Gravel	2.00	20'	Contract	8,000.00	8,888.88
Wantage Twp.	Mount Salem-Unionville Rd.,Sec.#4	Gravel	2.00	20'	Contract	13,000.00	14,444.44
Wantage Twp.	Quarryville-Wolf Pit Rd., Sec.#2	Gravel	2.80	20'	Contract	9,000.00	10,000.00
Wantage Twp.	Quarryville-Wolf Pit Rd., Sec.#3	Gravel	2.00	26'	Contract	12,000.00	13,333.33
			UNION COUNTY				
Cranford Twp.	Lincoln Av.,Sec.#4	"A" or "T"	.37	20'	Contract	10,350.00	11,500.00
Fanwood Boro.	King St.	"A" or "T"	.60	20'	Contract	12,500.00	13,888.88
Hillside Twp.	Glenwood Av.	Sheet Asphalt	.37	20'	Contract	13,000.00	14,444.44
Hillside Twp.	North Union Av.,Sec.#2	Reinf.Conc.	.07	20'	Contract	4,500.00	5,000.00
Hillside Twp.	Ramsey Av.	Reinf.Conc.	.32	20'	Contract	13,500.00	15,000.00
Kenilworth Boro.	North 8th St.	Reinf.Conc.	.28	20'	Contract	15,300.00	17,000.00
Kenilworth Boro.	Washington Av.	Reinf.Conc.	.38	20'	Contract	15,000.00	16,666.67
Mountainside Boro.	Central Av. & New Providence Rd.	Bit.Pen.Mac.	.42	20'	Contract	9,900.00	11,000.00

(continued on Sheet #27)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #27)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funnds
			UNION COUNTY (continued)				
Mountainside Boro.	New Providence Rd.	Bit.Pen.Mac.	.75	20'	Contract	$2,500.00	$2,777.77
New Providence Boro.	Elkwood Av.	"A" or "T"	1.05	20'	Contract	18,000.00	20,000.00
Roselle Boro.	Raritan Rd.	Sheet Asphalt	.44	20'	Contract	13,000.00	14,444.44
Roselle Park Boro.	Colfax Av.	Reinf.Conc.	.41	20'	Contract	11,000.00	12,222.22
Roselle Park Boro.	Colonia Rd.	Reinf.Conc.	.15	20'	Contract	7,200.00	8,000.00
Roselle Park Boro.	Lincoln Av.,Sec.#2	Reinf.Conc.	.40	20'	Contract	6,600.00	7,333.33
Roselle Park & Kenilworth Boros.	Colfax Av.,Sec.#2	Sheet Asphalt	.20	20'	Contract	9,000.00	10,000.00
Scotch Plains Twp.	King St.	"A" or "T"	.60	20'	Contract	12,500.00	13,888.88
Scotch Plains Twp.	Raritan Rd.	"A" or "T"	.38	20'	Contract	9,900.00	11,000.00
Scotch Plains Twp.	Westfield Av.,Sec.#2	Reinf.Conc.	.53	20'	Contract	14,400.00	16,000.00
Union Twp.	Commerce Av.	Reinf.Conc.	.28	20'	Contract	14,850.00	16,500.00
Union Twp.	Oakland Av.,Sec.#2	Reinf.Conc.	.33	20'	Contract	13,500.00	15,000.00
Union Twp.	Union Av.	Reinf.Conc.	.30	20'	Contract	13,500.00	15,000.00
Union Twp.	Union Av.,Sec.#2	Reinf.Conc.	.44	20'	Contract	22,500.00	25,000.00
Union Twp.	Woodland Av.	Reinf.Conc.	.25	20'	Contract	9,450.00	10,500.00
Westfield Town	E.Broad St.,Secs.#1,2,3; Windsor Av.,Livingston St. & Ripley Place	"A" or "T"	1.60	20-30'	Contract	50,070.00	55,633.33
Westfield Town	Woodland Av.	"A" or "T"	.66	20'	Contract	23,400.00	26,000.00
			WARREN COUNTY				
Alpha Boro.	Central & 4th Avs.	"A" or "T"	.41	20'	Contract	4,500.00	5,000.00
Alpha Boro.	Lee & Sigsbee Avs.	"A" or "T"	.40	20'	Contract	4,500.00	5,000.00
Alpha Boro.	Schley Av.	"A" or "T"	.40	20'	Contract	4,500.00	5,000.00
Alpha Boro.	Vulcanite Rd.	"A" or "T"	1.10	20'	Contract	3,000.00	3,333.33
Blairstown Twp.	Cobblewood Rd.	Gravel	1.80	20'	Contract	9,000.00	10,000.00
Franklin Twp.	River Rd.	Gravel	1.50	20'	Contract	11,100.00	12,333.33
Frelinghuysen Twp.	Johnsonburg-Kerr's Cor.-State Rt. 8	Gravel	3.50	20'	Contract	14,250.00	15,833.33
Hackettstown Town	Allamuchy Rd.	"A" or "T"	1.00	20'	Contract	15,000.00	16,666.66
Hackettstown Town	Allamuchy Rd.,Sec.#2	Reinf.Conc.	.75	20'	Contract	12,150.00	13,500.00
Hackettstown Town	Allamuchy Rd.,Sec.#3	Reinf.Conc.	.75	20'	Contract	9,000.00	10,000.00
Hardwick Twp.	Millbrook Rd.	Gravel	2.15	20'	Contract	9,000.00	10,000.00
Hardwick Twp.	Sunset Lake Rd.	Gravel	1.00	20'	Contract	3,600.00	4,000.00

(continued on Sheet #28)

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945 (continued, Sheet #28)

Municipality	Name of Road	Type	Estimated Mileage	Paved Width	Method of Construction	State Funds	State and Municipal Funds
			WARREN COUNTY (continued)				
Hardwick Twp.	Sunset Lake Rd., Sec. #2	Gravel	1.00	26'	Contract	$9,000.00	$10,000.00
Hardwick Twp.	Sunset Lake Rd., Sec. #3	Gravel	1.70	20'	Contract	9,000.00	10,000.00
Harmony Twp.	Ridge Rd. & Lows Hollow Rd. (Flood Damage)	Gravel	1.08	18'	FA	9,000.00	10,000.00
Independence Twp.	Ryan Rd.	Gravel	1.30	20'	Contract	7,914.06	8,793.40
Knowlton Twp.	Walnut Cor.-Blairstown Line Rd., Secs. #1&2	Gravel	3.95	20'	Contract	23,500.00	26,111.11
Knowlton Twp.	Walnut Cor.-Centreville Rd.	Gravel	2.10	20'	Contract	9,000.00	10,000.00
Mansfield Twp.	Andersontown-Butler Park Rd.	Gravel	1.25	20'	Contract	14,400.00	16,000.00
Pahaquarry Twp.	Millbrook-Blairstown Rd.	Gravel	1.50	20'	Contract	14,850.00	16,500.00
Pahaquarry Twp.	River Rd., Sec. #8	Gravel	3.00	20'	Contract	9,000.00	10,000.00
Phillipsburg Town	Carpentersville Rd. & Kent St.	Bit.Pen.Mac.	.70	20'	Contract	6,750.00	7,500.00
Phillipsburg Town	North Main St.	"A" or "T"	.30	20'	Contract	5,400.00	6,000.00
Washington Twp.	Cemetery Hill-Asbury Rd. & Spur	Gravel	3.60	26'	Contract	22,500.00	25,000.00
Washington Twp.	Mine Hill Rd.	Gravel	1.25	20'	Contract	9,000.00	10,000.00
White Twp.	Bridgeville-Mountain Lake Rd.	Gravel	.80	20'	Contract	15,600.00	17,333.33
	Grand Totals:		624.59			$5,247,772.85	$5,830,857.54

Note: For list of Projects Approved from 1946 Funds see separate list.

APPLICATIONS APPROVED FROM 1946 TOWNSHIP AND BOROUGH AID FUNDS

Municipality	Name of Road	Length	Type Surface	State's Share Allotted
	ATLANTIC COUNTY			
Absecon City	Church St.,Euclid Dr.,Marlin Rd. & Showelltown Av.	.605	FA-BC-1	$ 5,000.00
Buena Vista Twp.	Post Road	2.67	BST	4,000.00
Egg Harbor Twp.	6th Av. & Poplar Av.,Sec.#2	2.13	BST	3,000.00
Egg Harbor City	Atlantic & Arago Avs.,Sec.#2	.95	FA-BC-1	5,000.00
Folsom Boro.	8th St.	1.287	Gravel	3,000.00
Galloway Twp.	Leipsig & Ocean Avs.	1.3	BST	2,500.00
Hamilton Twp.	Landis Av. & Laurel St.	2.404	Gravel	4,000.00
Hammonton Town	Plymouth Rd.,Laurel St.,Oak Rd. & 2nd Rd.	4.13	Gravel & BST	5,000.00
Linwood City	West Av.,Sec.#5, & Seaview Av.,Sec.#4	.45	Gravel	6,500.00
Longport Boro.	19th,24th,25th,35th Avs.	.36	FA-BC-1	4,500.00
Margate City	Adams,Jefferson,Madison,Monroe, Lancaster & Mansfield Avs.	.688	FA-BC-1	6,800.00
Northfield City	Broad St.	.41	FA-BC-1	6,500.00
Pleasantville City	Church St.	.42	FA-BC-1	6,000.00
Somers Point City	Groveland Av.,Sec.#2, & Bay Av.	.71	FA-BC-1	3,500.00
Ventnor City	Atlantic Av.	.43	FA-BC-1	6,700.00
Weymouth Twp.	South Jersey Av.,Sec.#2	.31	Gravel,BST	3,000.00
	BERGEN COUNTY			
Bergenfield Boro.	East Clinton Av.,Sec.#3	.191	Bit.Pen.Mac.	3,600.00
Hohokus Boro.	West Saddle River Rd.	.921	Bit.Pen.Mac.	7,500.00
Mahwah Twp.	Sparrowbush Rd.,Sec.#3	.45	Bit.Pen.Mac.	7,500.00
North Arlington Boro.	Boston Av.	.33	Bit.Conc.	8,400.00
Oakland Boro.	West Oakland Av.,Sec.#2	.83	Bit.Pen.Mac.	12,000.00
River Vale Twp.	Poplar Rd. (Reynolds Rd.)	.624	Bit.Pen.Mac.	1,500.00
Rochelle Park Twp.	Becker Av.	.41	Bit.Pen.Mac.	6,000.00
South Hackensack Twp.	Green St.	.33	Bit.Pen.Mac.	6,000.00
Teaneck Twp.	Englewood Av.	.484	Reinf.Conc.	12,010.76
Upper Saddle River Boro.	Weiss Rd.	.621	Bit.Pen.Mac.	10,200.00

(continued on Sheet #2)

APPLICATIONS APPROVED FROM 1946 TOWNSHIP AND BOROUGH AID FUNDS (continued, Sheet 2)

Municipality	Name of Road	Length	Type Surface	State's Share Allotted
	BURLINGTON COUNTY			
Bordentown City	2nd St.	.156	Reinf.Conc.	$ 3,600.00
Chesterfield Twp.	Sykesville-Chesterfield Rd.	1.2	Gravel,BST	1,800.00
Eastampton Twp.	Smithville Rd.,Sec.#2	1.519	Gravel,BST	2,700.00
Evesham Twp.	Evans Rd.	1.527	Gravel	3,600.00
Fieldsboro Boro.	Washington St.,Sec.#2	.2	Gravel,BST	1,800.00
Hainesport Twp.	Ark Rd.	.686	Gravel,BST	1,800.00
Hainesport Twp.	Bishop St.,Sec.#3	.13	Gravel,BST	1,800.00
Lumberton Twp.	Ark Rd.	.7	Gravel,BST	4,500.00
Medford Lakes Boro.	Mohawk,Misha Mokwa & Hiawatha Trails	.71	Gravel,BST	3,600.00
Medford Twp.	Wilkins Station to Chairville-Sandtown	.9	Gravel,BST	2,550.00
Mount Holly Twp.	Grant St. & King St.,Sec.#1	.35	Bit.Pen.Mac.	5,400.00
Mount Laurel Twp.	Elbo Lane,Sec.#3	1.8	Gravel,BST	4,500.00
North Hanover Twp.	Paulson Rd.,Sec.#2	1.6	Gravel,BST	2,700.00
Palmyra Boro.	3rd Av.	.103	Gravel,BST	1,350.00
Pemberton Twp.	Arneys Mount Rd.	1.5	Gravel,BST	4,500.00
Shamong Twp.	Piper's Corner Rd.,Sec.#4	.75	Gravel,BST	4,500.00
Southampton Twp.	Sooy Place Rd.	.8	Gravel	6,300.00
Springfield Twp.	Arneys Mount Rd.	2.3	Gravel,BST	4,500.00
Westampton Twp.	Kings Rd.	2.3	Gravel,BST	4,500.00
Willingboro Twp.	Sunset Rd.	1.2	Gravel	7,200.00
Woodland Twp.	Sooy Place-Hedger House Rd.,Sec.#3	1.136	Gravel,BST	1,800.00
	CAMDEN COUNTY			
Audubon Boro.	East Atlantic Av.	.22	Reinf.Conc.	7,650.00
Barrington Boro.	Wood Av.	.64	Gravel,BST	2,250.00
Bellmawr Boro.	Bell Rd.	.55	Bit.Pen.Mac.	4,500.00
Berlin Boro.	Estaugh Av.,Sec.#2	.08	Gravel,BST	675.00
Berlin Twp.	Taunton Av.	1.3	BST	2,700.00
Chesilhurst Boro.	Hayes Mill Rd. & Washington Av.	.35	BST	1,080.00
Delaware Twp.	Caldwell Rd.	.74	Gravel,BST	7,290.00
Gloucester Twp.	Turnerville-Hickstown Rd.,Sec.#2	1.466	Reconditioned Gravel,BST	5,400.00
Gloucester Twp.	Williamstown-Chews Landing Rd.,Sec.#2	2.105	Gravel	3,000.00
Haddon Heights Boro.	East Atlantic Av.	.089	Plain Conc.	3,600.00

(continued on Sheet #3)

APPLICATIONS APPROVED FROM 1946 TOWNSHIP AND BOROUGH AID FUNDS (continued, Sheet 3)

Municipality	Name of Road	Length	Type Surface	State's Share Allotted
	CAMDEN COUNTY (continued)			
Laurel Springs Boro.	East Atlantic Av.	.546	Bit.Pen.Mac.	$ 4,500.00
Pennsauken Twp.	Union Av.,Sec.#3	1.553	Bit.Pen.Mac.	9,000.00
Pennsauken Twp.	Woodland Av. & Chestnut Av.,Sec.#3	.575	Soil Cement	8,205.00
Runnemede Boro.	Davis Rd. & Shubert Av.	1.1	Gravel,BST	9,000.00
Stratford Boro.	Vassar Av.	.7	Gravel,BST	2,000.00
Waterford Twp.	Cedar Av.	.09	Gravel	900.00
Waterford Twp.	Hayes Mill Rd. (Little Italy Rd.)	.5	Gravel,Reconstruction	2,250.00
Winslow Twp.	Cedar Av.	.11	Gravel	1,000.00
	CAPE MAY COUNTY			
Cape May City	Washington,Elmira,Bank,Broad,various sts.	1.93	FA-BC-1	16,500.00
North Wildwood City	Maryland,Walnut,11th,12th,18th,23rd Avs.	.78	FA-BC-1	15,000.00
Ocean City	Bayonne Pl.,Surf Rd.,North Point Rd., Bay Rd. & Harbor Rd.	1.019	FA-BC-1	17,500.00
Sea Isle City	38th,39th,40th,44th,45th,46th,47th, 48th,49th Sts.	.939	FA-BC-1	5,000.00
Stone Harbor Boro.	93rd St.	.41	FA-BC-1	4,000.00
Wildwood City	(Streets to be determined)		FA-BC-1	12,000.00
Wildwood Crest Boro.	(Streets to be determined)		FA-BC-1	2,000.00
Woodbine Boro.	Jefferson & Madison Avs.	.264	FA-BC-1	3,000.00
	CUMBERLAND COUNTY			
Commercial Twp.	(Roads to be determined)			8,100.00
Deerfield Twp.	Kenyon Av.,Sec.#3	.5	Gravel	4,500.00
Downe Twp.	(Roads to be determined)			6,300.00
Fairfield Twp.	Clarks Pond Rd.,Sec.#4	.52	Gravel	3,240.00
Fairfield Twp.	Joseph Gould Rd.	.85	Gravel	3,600.00
Hopewell Twp.	(Roads to be determined)			5,400.00
Landis Twp.	Union Rd.Extension (surface) & Bennetts Mills Rd.	5.	Gravel	9,000.00
Maurice River Twp.	East Point Rd.,Sec.#2	1.	Gravel	3,600.00
Maurice River Twp.	East Point Rd.,Sec.#3	1.	Gravel	3,600.00
Stow Creek Twp.	(Road to be determined)			4,000.00
Vineland Boro.	Montrose St. (paving)	1.	FA-BC-1	9,000.00

(continued on Sheet #4)

APPLICATIONS APPROVED FROM 1946 TOWNSHIP AND BOROUGH AID FUNDS (continued, Sheet 4)

Municipality	Name of Road	Length	Type Surface	State's Share Allotted
	ESSEX COUNTY			
Belleville Town	Greylock Parkway & Chestnut St.	.62	FA-BC-2	$ 25,000.00
Bloomfield Town	Darling Av.	.26	Reinf.Conc.	17,085.00
Montclair Town	Harrison Av. (paving)	.45	FA-BC-2	28,000.00
Nutley Town	Franklin Av.	.556	Bit.Pen.Mac.	6,715.00
Verona Boro.	Derwent Av.	.35	Mod.Bit.Pen.Mac.	23,200.00
	GLOUCESTER COUNTY			
Clayton Boro.	East High & Main Sts.	.77	FA-BC-1	7,000.00
Deptford Twp.	(Streets to be determined)		Gravel,BST	7,000.00
East Greenwich Twp.	Jessup Mill Rd.	.95	Gravel,BST	6,000.00
Elk Twp.	Stanger Av.,Sec.#2, & Ewan-Bridgeton Rd.,Sec.#2	1.05	Gravel	5,000.00
Franklin Twp.	Blue Bell Rd.	2.6	Gravel,BST	7,500.00
Glassboro Boro.	Various sts. 1946	2.75	Gravel,BST	7,000.00
Greenwich Twp.	(Streets to be determined)		Gravel,BST	2,500.00
Logan Twp.	Cootown Rd.,Flood Gates Rd.,etc.	2.75	Reconstruction BST	4,000.00
Mantua Twp.	Passaic,Atlantic & Union Sts.	.5	Gravel,BST	1,800.00
Monroe Twp.	Jackson Rd.	4.2	Gravel,BST	3,500.00
National Park Boro.	Wesley,Monument,Lincoln,Lakehurst Avs.	2.3	Gravel	3,500.00
Newfield Boro.	Rena St.	.75	Gravel,Drainage	2,000.00
Paulsboro Boro.	Jefferson St.	.65	FA-BC-1	4,000.00
Pitman Boro.	McClelland,Poplar,Tuohy,Grant,McKinley Avs.	1.542	FA-BC-1	7,500.00
South Harrison Twp.	Harrisonville-Ferrell Rd.,Secs.#2 & #3	2.	Gravel	2,500.00
Swedesboro Boro.	Guest Av.	.7	Gravel	3,500.00
Washington Twp.	Downer Rd.	2.	Gravel	5,000.00
Wenonah Boro.	Cherry St.,etc.	.35	Reconstr.Gravel,Drain.	4,500.00
West Deptford Twp.	(Streets to be determined)		Gravel,BST	4,500.00
Westville Boro.	Summit & Highland Avs.	1.06	Gravel,BST	7,000.00
Woodbury City	(Streets to be determined)		FA-BC-1	8,500.00
Woodbury Heights Boro.	Academy Av. (reconstruction)	.2	Gravel,BST	3,500.00
Woolwich Twp.	Pedricktown-Harrisonville Rd.,Sec.#4	1.4	Gravel,BST	6,000.00

(continued on Sheet #5)

APPLICATIONS APPROVED FROM 1946 TOWNSHIP AND BOROUGH AID FUNDS (continued, Sheet 5)

Municipality	Name of Road	Length	Type Surface	State's Share Allotted
	HUDSON COUNTY			
East Newark Boro.	President St.	.13	Reinf.Conc.	$ 10,000.00
Guttenberg Town	70th St.,Sec.#4	.15	Sheet Asphalt	15,000.00
Harrison Town	Bergen St.	.29	Reinf.Conc.	12,500.00
Harrison Town	Ogden Av.	.11	Reinf.Conc.	10,000.00
Harrison Town	South 3rd St.	.11	Reinf.Conc.	7,500.00
Kearny Town	Ogden Av.	.11	Bit.Pen.Mac.	10,000.00
Kearny Town	Pennsylvania Av.	.35	FA-BC-1	10,000.00
North Bergen Twp.	Park Av.	.35	Sheet Asphalt	25,000.00
Secaucus Town	6th St.	.32	Reinf.Conc.	20,000.00
Weehawken Twp.	Gregory Av.	.	Reinf.Conc.	15,000.00
West New York Town	Palisade Av.	.91	Plain Conc.	15,000.00
	HUNTERDON COUNTY			
Alexandria Twp.	Neilson Corner-Mechlin Corner Rd.,Sec. #4	2.85	Bit.Pen.Mac.	15,000.00
Bethlehem Twp.	Pattenburg-Norton Rd.,Sec.#2	.85	Bit.Pen.Mac.	5,000.00
East Amwell Twp.	VanLiew's Corner-Hopewell Rd.	2.1	Bit.Pen.Mac.	20,000.00
Holland Twp.	Hawk School House Rd.	1.7	Bit.Pen.Mac.	11,000.00
Readington Twp.	Pleasant Run-Centerville Rd.,Sec.#2	3.2	"A" or "T"	20,000.00
West Amwell Twp.	Harbourton Rd.	1.1	Bit.Pen.Mac.	4,000.00
	MERCER COUNTY			
Ewing Twp.	Federal City Rd. (paving)	.8	Bit.Pen.Mac.	8,100.00
Hamilton Twp.	Bear Swamp Rd.,Sec.#2	.9	Bit.Pen.Mac.	12,000.00
Hopewell Boro.	Seminary Av.	.144	"A" or "T"	3,600.00
Hopewell Twp.	Moore's Station-Acker's Cor.Rd.,Sec.#7	2.2	Bit.Pen.Mac.	9,900.00
Lawrence Twp.	Princeton Pike,Sec.#5	.3	Bit.Pen.Mac.	9,000.00
Princeton Boro.	Spring St.	.83	"A" or "T"	3,600.00
Princeton Twp.	Witherspoon St.	.36	"A" or "T"	5,400.00
Princeton Twp.	Princeton Pike,Sec.#4	.74	Bit.Pen.Mac.	4,500.00
Washington Twp.	Windsor-Sharon Rd.,Sec.#5	.6	Bit.Pen.Mac.	11,700.00
West Windsor Twp.	Alexander Rd.,Sec.#3	1.37	Bit.Pen.Mac.	7,200.00

(continued on Sheet #6)

APPLICATIONS APPROVED FROM 1946 TOWNSHIP AND BOROUGH AID FUNDS (continued, Sheet 6)

Municipality	Name of Road	Length	Type Surface	State's Share Allotted
	MIDDLESEX COUNTY			
Cranbury Twp.	Cranbury Station-Wyckoff's Mills Rd.	1.	Gravel,BST	$ 4,500.00
Dunellen Boro.	Jackson Av.	.333	Bit.Pen.Mac.	8,100.00
Metuchen Boro.	Grove Av.	.4	Reinf.Conc.	10,000.00
Middlesex Boro.	Warrenville Rd.	.53	"A" or "T"	9,000.00
Monroe Twp.	Cranbury Station-Wyckoff's Mills & Halsey Reed Rd.	1.77	Gravel,BST	6,300.00
Piscataway Twp.	South Randolphville Rd.	1.2	"A" or "T"	7,000.00
Plainsboro Twp.	Scotts Corner-Monmouth Junction,Sec.#3	.6	"A" or "T"	10,000.00
South Brunswick Twp.	Friendship Rd.	.8	"A" or "T"	15,600.00
	MONMOUTH COUNTY			
Atlantic Twp.	Bucks Mills Rd.	.9	Gravel,BST,MIP	3,600.00
Atlantic Highlands Boro.	Bay Av.,Sec.#2; Av. "D" & Grand Av.	1.32	"A" or "T"	2,700.00
Belmar Boro.	River Av. & "C" St.	.824	"A" or "T"	2,700.00
Brielle Boro.	Green Av.,Sec.#2	.4	"A" or "T"	2,700.00
Eatontown Boro.	South St.	.494	BST, MIP	2,700.00
Fair Haven Boro.	Lake Av.,Sec.#2	.26	BST, MIP	2,250.00
Freehold Twp.	Siloam Rd.	2.81	BST, MIP	2,450.00
Howell Twp.	Randolph Rd.,Sec.#2	1.	BST, MIP	3,600.00
Keyport Boro.	Clark St.	.55	Gravel	2,700.00
Manalapan Twp.	Englishtown-Tracy Station Rd.	.6	Gravel,BST,Drainage	1,800.00
Manasquan Boro.	Colby Av.	.42	Gravel,BST,MIP	3,600.00
Matawan Boro.	Mill Rd.	.5	Gravel,BST,Drainage	2,700.00
Middletown Twp.	Locust Point Rd.	.5	Gravel	3,150.00
Middletown Twp.	West Riverside Drive	.4	Gravel,BST	2,700.00
Monmouth Beach Boro.	Patten Av.	.45	Gravel,BST,MIP	2,700.00
Neptune City Boro.	Bennett,Union Avs. & various sts.	1.588	BST & Gravel,BST	3,600.00
Neptune Twp.	Stratford,Milton,Hawthorne Avs.,etc.	1.09	Gravel,BST	4,500.00
Ocean Twp.	Logan Rd.	.588	Gravel,BST,MIP	3,500.00
Oceanport Boro.	Port-au-peck Av.	1.	Gravel	3,150.00
Raritan Twp.	Clark St.	.4	Gravel	2,700.00
Rumson Boro.	Bellevue Av.,Sec.#2	.48	BST, MIP	2,700.00
Sea Girt Boro.	The Crescent,Baltimore Blvd.,Phila.Blvd.	1.5	BST	2,000.00

(continued on Sheet #7)

APPLICATIONS APPROVED FROM 1946 TOWNSHIP AND BOROUGH AID FUNDS (continued, Sheet 7)

Municipality	Name of Road	Length	Type Surface	State's Share Allotted
		MONMOUTH COUNTY	(continued)	
Shrewsbury Twp.	Water St.	.8	BST,MIP	$ 3,600.00
Upper Freehold Twp.	Polhemustown-New Egypt Rd.	1.7	Gravel,BST	3,600.00
Wall Twp.	School House & Bailey's Corner-Glendola Rds.	3.54	BST	3,600.00
		MORRIS COUNTY		
Boonton Twp.	Meriden Rd.	1.	Bit.Pen.Mac.	8,100.00
Chatham Twp.	River Rd.,Sec.#2	.75	"A" or "T"	8,100.00
Chester Twp.	Parker Rd.,Sec.#2	.75	Bit.Pen.Mac.	9,000.00
Denville Twp.	Franklin Av.,Sec.#2	1.	"A" or "T"	7,500.00
East Hanover Twp.	McKinley Av.,Sec.#1	.456	"A" or "T"	8,100.00
Mendham Twp.	Ironia Rd.	1.7	"A" or "T"	8,100.00
Morris Plains Boro.	Malapardis Rd.	.41	"A" or "T"	3,600.00
Parsippany-Troy Hills Twp.	Vail Rd.	2.5	Bit.Pen.Mac.	8,100.00
Riverdale Boro.	Mathews Rd.,Sec.#2	.5	Bit.Pen.Mac.	6,300.00
Roxbury Twp.	Dell Av.	1.3	"A" or "T"	8,100.00
		OCEAN COUNTY		
Barnegat City Boro.	19th St. & 20th St.	.3	Gravel,Drainage	2,000.00
Beach Haven Boro.	Pelham,Fairview,Essex Avs.,etc.	1.149	BST, MIP	3,300.00
Brick Twp.	Midstreams Rd.,Sec.#1	1.65	Gravel	3,300.00
Dover Twp.	Beaver Dam Rd.,Sec.#2, & Maple St.,Sec.#2	1.4	Gravel,BST	3,600.00
Berkeley Twp.	Bayview Blvd.	1.3	Gravel	2,600.00
Beachwood Boro.	Forepeake Av.,Sec.#2, & Larboard St.	.63	Gravel	2,600.00
Harvey Cedars Boro.	73rd,74th,various sts.	1.064	Gravel & BST	3,300.00
Lacey Twp.	Mill St.	.4	Gravel	2,700.00
Lakewood Twp.	South Lake Drive,Sec.#2	.28	Gravel	4,000.00
Lavallette Boro.	(roads to be determined later)			3,000.00
Jackson Twp.	Bowmans Rd.,Sec.#1	3.	Gravel	3,300.00
Little Egg Harbor Twp.	Center,Stafford Forge,Otis Bog Rds.	3.64	BST	2,200.00
Long Beach Twp.	Ocean Blvd. & Atlantic Av.	3.75	BST,MIP	6,000.00
Manchester Twp.	Cedar Bridge-Whiting Rd.,Sec.#1	5.	Gravel	3,400.00

(continued on Sheet #8)

APPLICATIONS APPROVED FROM 1946 TOWNSHIP AND BOROUGH AID FUNDS (continued, Sheet #8)

Municipality	Name of Road	Length	Type Surface	State's Share Allotted
	OCEAN COUNTY (continued)			
Ocean Gate Boro.	Narragansette & Monmouth Avs.	100'	Concrete bulkheads	$ 2,250.00
Ocean Township	Wells Mills-Warren Grove Rd.,Sec.#1	1.	Gravel	3,600.00
Pine Beach Boro.	Riverside Drive	740'	Treated timber bulkheads	4,800.00
Plumsted Twp.	Big Woods (Archertown) Rd.	2.75	Gravel	2,700.00
Point Pleasant Boro.	Bridge Av. Extension	1.2	Gravel	2,500.00
Point Pleasant Beach Boro.	(roads to be determined later)		Gravel	2,700.00
Seaside Heights Boro.	Barnegat Av.,Sec.#2	.269	Gravel	1,950.00
Ship Bottom Boro.	Various Sts.	2.191	BST,MIP	3,300.00
Surf City Boro.	Various Sts.	2.069	BST,MIP	3,300.00
Union Twp.	Bayview Blvd.	.8	Gravel	2,600.00
	PASSAIC COUNTY			
Bloomingdale Boro.	Mary St.,Elizabeth St.Sec.#2, William St. & Sophia St.	.285	Bit.Pen.Mac.	3,000.00
Bloomingdale Boro.	Oak St. & Reeve Av.	.34	Bit.Pen.Mac.	3,500.00
Haledon Boro.	Southside Av.	.32	"A" or "T"	6,000.00
Hawthorne Boro.	Fairview Av.	.3	Bit.Pen.Mac.	2,000.00
Hawthorne Boro.	Royal Av.,Sec.#2	.4	"A" or "T"	4,500.00
Little Falls Twp.	Jacobus Av.	.16	Bit.Pen.Mac.	3,000.00
Little Falls Twp.	Lincoln Av.	.33	FA-BC-1	3,500.00
North Haledon Boro.	Lotz St.	.34	Bit.Pen.Mac.	3,000.00
North Haledon Boro.	Rothesay Av.	.19	Bit.Pen.Mac.	3,500.00
Pompton Lakes Boro.	Dawes Highway	.12	Bit.Pen.Mac.	2,500.00
Pompton Lakes Boro.	Riverdale Blvd.	.4	Bit.Pen.Mac.	3,500.00
Prospect Park Boro.	Brown Av.,Sec.#2	.15	"A" or "T"	3,500.00
Ringwood Boro.	Snake Den Rd. & Dale Rd.	1.3	Bit.Pen.Mac.	3,500.00
Ringwood Boro.	Stonetown Rd.	.4	Bit.Pen.Mac.	3,500.00
Totowa Boro.	Frances St.	.146	Bit.Pen.Mac.	3,285.00
Wanaque Boro.	Greenwood Av.,Sec.#2	.5	Bit.Pen.Mac.	3,215.00
Wayne Twp.	Lake Drive West	.32	Bit.Pen.Mac.	6,000.00
West Milford Twp.	Morsetown Rd.	.66	Bit.Pen.Mac.	4,000.00
West Milford Twp.	West Brook Rd.,Sec.#4	.66	Bit.Pen.Mac.	4,000.00
West Paterson Boro.	Marcellus Av.,W.32nd,W.34th,W.35th Sts.	.47	"A" or "T"	4,000.00

(continued on Sheet #9)

APPLICATIONS APPROVED FROM 1946 TOWNSHIP AND BOROUGH AID FUNDS (continued, Sheet #9)

Municipality	Name of Road	Length	Type Surface	State's Share Allotted
	PASSAIC COUNTY (continued)			
West Paterson Boro.	Providence Av. & W.36th St.	.26	"A" or "T"	$ 2,000.00
	SALEM COUNTY			
Alloway Twp.	Swing-West Rd.	.75	Gravel,BST	5,400.00
Lower Alloways Creek Twp.	Stowe Neck Rd.	1.8	Gravel,BST	5,400.00
Lower Penns Neck Twp.	Lehigh Rd.	.9	Gravel	4,500.00
Lower Penns Neck Twp.	Rutgers Rd.	.75	Gravel	4,000.00
Mannington Twp.	Sandy Ridge Rd.	.9	Gravel,BST	4,500.00
Penns Grove Boro.	Franklin St.	.205	FA-BC-1	8,000.00
Pilesgrove Twp.	Bishop-Stewart Rd.	2.2	Gravel,BST	5,400.00
Pittsgrove Twp.	Harris-Langley Rd.	1.04	Gravel,BST	4,500.00
Quinton Twp.	Burden Hill Rd.	3.1	Gravel,BST	4,500.00
Salem City	Olive St.	.25	Type "A"	9,000.00
Upper Penns Neck Twp.	Plant St.	.55	Gravel,BST	4,500.00
Upper Pittsgrove Twp.	Cedar Lane	1.	Gravel,BST	4,500.00
Woodstown Boro.	Dickinson St. & Church St. (paving)	.32	Type "A"	10,800.00
	SOMERSET COUNTY			
Bridgewater Twp.	Foot Hill Rd.,Sec.#5	1.	"A" or "T"	18,000.00
Franklin Twp.	Cedar Grove Lane,Sec.#4	.75	"A" or "T"	7,000.00
Green Brook Twp.	Warrenville Rd.	1.22	"A" or "T"	16,700.00
Hillsborough Twp.	New Center School House Rd.,Sec.#6	3.	"A" or "T"	7,000.00
Montgomery Twp.	Hollow Rd.,Sec.#4	1.5	"A" or "T"	7,000.00
Somerville Boro.	North Doughty Av.	.102	"A" or "T"	3,300.00
Warren Twp.	Mount Horeb Rd.,Sec.#3	.85	"A" or "T"	16,000.00
	SUSSEX COUNTY			
Andover Boro.	High St.	.12	Bit.Pen.Mac.	3,000.00
Andover Twp.	Lawrence Rd.	2.	Gravel	5,000.00
Byram Twp.	Roseville Rd.	3.2	Gravel	5,000.00
Franklin Boro.	Wildcat Rd.	1.5	Gravel	7,500.00
Fredon Twp.	Willows Rd.	1.5	Gravel	5,000.00
Green Twp.	Shotwell-Dark Moon Rd.	1.5	Gravel	5,000.00
Lafayette Twp.	Lafayette Meadows Rd.	2.84	BST	5,000.00

(continued on Sheet #10)

APPLICATIONS APPROVED FROM 1946 TOWNSHIP AND BOROUGH AID FUNDS (continued, Sheet #10)

Municipality	Name of Road	Length	Type Surface	State's Share Allotted
	SUSSEX COUNTY (continued)			
Montague Twp.	Weider Rd.	1.5	Gravel	$ 3,500.00
Newton Town	Clinton St.	.27	Bit.Pen.Mac.	6,000.00
Ogdensburg Boro.	Brook's Flat Rd.	.4	Gravel	6,000.00
Sparta Twp.	Old Stanhope Rd.,Secs.#1 & #2	2.463	Gravel	5,000.00
Stillwater Twp.	Branigan Rd.	1.	Gravel	3,750.00
Stillwater Twp.	Casper Losey Rd.	.5	Gravel	2,250.00
Sussex Boro.	Munson & Walnut Sts.	.75	Bit.Pen.Mac.	3,000.00
Vernon Twp.	Highland Lakes-Canisteer Rd.,Sec.#2	1.	Gravel	5,000.00
Wantage Twp.	Lusscroft-Beemersville Rd.	1.5	Gravel	5,000.00
	UNION COUNTY			
Hillside Twp.	Paul St. & Cornell Place	.303	Reinf.Conc.	13,500.00
New Providence Twp.	Mountain Avenue Cut-off	1.	"A" or "T"	26,000.00
New Providence Boro.	Mountain Avenue Cut-off	1.	"A" or "T"	22,900.00
Union Twp.	Sayre Rd.	.063	Reinf.Conc.	3,600.00
Union Twp.	Stanley Terrace (Reconstruction)	.208	Reinf.Conc.	9,000.00
	WARREN COUNTY			
Blairstown Twp.	Cobblewood Rd.,Sec.#1	.9	Gravel,BST	9,000.00
Hackettstown Town	Allamuchy Rd.,Sec.#3	.75	Reinf.Conc.	18,000.00
Hardwick Twp.	Camp Kenwood Rd.	2.5	Gravel,BST	9,000.00
Hope Twp.	Locust Lake Rd.	2.	Gravel	27,000.00
Independence Twp.	Ryan Rd.	1.3	Gravel,BST	7,200.00
Knowlton Twp.	Zion Chapel-Sarepta Rd.	1.2	Gravel	4,800.00

TOWNSHIP & BOROUGH AID MAINTENANCE

County	Total Amount of Schedule	State's Share from 1945 Funds	State's Share from previous years funds	Total State's Share Obligated
Atlantic	$ 31,631.36	$ 25,000.00	$ 3,468.23	$ 28,468.23
Bergen	31,523.41	25,000.00	-	25,000.00
Burlington	27,777.78	25,000.00	-	25,000.00
Camden	43,921.11	25,000.00	14,529.00	39,529.00
Cape May	27,777.78	25,000.00	-	25,000.00
Cumberland	31,299.83	25,000.00	3,169.85	28,169.85
*Essex	-	-	-	-
Gloucester	41,355.00	25,000.00	12,219.50	37,219.50
#Hudson	-	-	-	-
Hunterdon	49,666.69	25,000.00	19,700.02	44,700.02
Mercer	44,611.10	25,000.00	15,149.99	40,149.99
Middlesex	54,334.70	25,000.00	23,901.23	48,901.23
Monmouth	32,620.27	25,000.00	4,160.20	29,160.20
Morris	33,277.78	25,000.00	4,950.00	29,950.00
Ocean	71,351.25	25,000.00	39,216.13	64,216.13
Passaic	27,777.78	25,000.00	-	25,000.00
Salem	32,320.97	25,000.00	4,088.87	29,088.87
Somerset	61,656.14	25,000.00	30,490.52	55,490.52
Sussex	42,272.05	25,000.00	13,044.85	38,044.85
Union	3,500.00	3,150.00	-	3,150.00
Warren	28,208.80	25,000.00	387.92	25,387.92
Totals	$716,883.80	$453,150.00	$188,476.31	$641,626.31

*Funds cancelled and re-allotted to Harrison Avenue, Montclair Town, in accordance with Chapter 380, Laws of 1939
#Funds cancelled and re-allotted to Grace Street, Secaucus Town, in accordance with Chapter 380, Laws of 1939

TOWNSHIP & BOROUGH AID APPLICATIONS SUBMITTED FOR 1946 FUNDS

County	Number of Applications	Mileage	Estimated Cost	State's Share Requested	Dirt Road Fund Requested	State's Share Available
Atlantic	19	20.147	$ 183,607.43	$ 165,246.69	$ 50,000.00	$ 125,000.00
Bergen	44	16.806	663,056.67	596,751.00	50,000.00	125,000.00
Burlington	50	51.833	306,727.78	276,055.00	50,000.00	125,000.00
Camden	36	26.577	262,881.79	236,593.61	50,000.00	125,000.00
Cape May	9	7.782	133,637.03	120,273.33	50,000.00	125,000.00
Cumberland	14	12.570	140,800.00	126,720.00	50,000.00	125,000.00
Essex	18	7.550	421,834.78	379,651.30	50,000.00	125,000.00
Gloucester	25	31.662	354,664.13	319,197.72	-	125,000.00
Hudson	18	3.580	507,577.78	456,820.00	-	125,000.00
Hunterdon	19	39.570	654,777.78	589,300.00	50,000.00	125,000.00
Mercer	12	12.109	299,788.89	269,810.00	50,000.00	125,000.00
Middlesex	22	18.373	416,844.44	375,160.00	50,000.00	125,000.00
Monmouth	37	34.094	241,735.55	217,562.00	50,000.00	125,000.00
Morris	25	22.499	437,902.90	394,112.60	50,000.00	125,000.00
Ocean	26	30.702	200,210.22	180,189.20	50,000.00	125,000.00
Passaic	23	8.511	190,783.33	171,705.00	50,000.00	125,000.00
Salem	18	17.015	138,222.22	124,400.00	50,000.00	125,000.00
Somerset	19	15.366	341,263.11	307,136.80	50,000.00	125,000.00
Sussex	27	42.375	302,944.44	272,650.00	50,000.00	125,000.00
Union	11	5.842	187,222.22	168,500.00	50,000.00	125,000.00
Warren	10	17.079	186,888.89	168,200.00	50,000.00	125,000.00
Totals	482	442.042	$6,573,371.38	$5,916,034.25	$950,000.00	$2,625,000.00

RECAPITULATION

MOTOR VEHICLE AID

STATUS OF CONTRACT OR FORCE ACCOUNT PROJECTS, JANUARY 1, 1945 to DECEMBER 31, 1945

Type	Mileage	State's Allotment	Contract Amount, Final Cost or Estimated Cost
Gravel	2.680	$ 32,442.13	$ 32,433.68
Gravel BST	2.800	12,240.00	11,281.53
Type "A" or "T"	4.060	43,533.29	61,662.98
Reinforced Concrete	.786	20,000.00	55,576.60
Concrete Curb & Gutter	.310	11,232.50	11,232.50
Timber Bulkhead	.326	23,396.00	28,896.00
Grand Totals	10.962	$142,843.92	$201,083.29

TOWNSHIP & BOROUGH AID ROADS COMPLETED JANUARY 1, 1945 to DECEMBER 31, 1945

Type	Mileage	State's Share of Construction	State's Share of Engineering	Final Cost of Construction	Total Cost of Project
Gravel	23.122	$111,517.60	$ 4,502.16	$127,365.45	$132,367.84
Gravel BST	8.137	55,270.13	2,006.01	63,760.00	67,011.75
Gravel CaCl^2	5.798	32,397.88	2,160.53	36,056.63	38,469.63
Gravel MIP	.955	10,193.72	656.10	11,326.36	12,635.81
Bituminous Surface Treatment	25.534	53,106.17	159.15	62,381.55	62,870.61
Mixed in Place BST	20,514	74,803.74	957.34	86,526.30	87,911.50
Bituminous Penetration Macadam	4.443	94,564.60	2,431.31	112,881.27	116,916.72
Type "A" or "T"	3.589	82,120.83	1,640.71	93,999.50	100,629.65
Bituminous Concrete	4.545	98,036.48	1,113.39	110,627.96	111,865.06
Sheet Asphalt	2.003	120,405.10	10,949.74	133,783.45	147,538.94
Plain Concrete	.075	6,401.23	-	7,112.48	7,112.48
Grading & Drainage	.603	25,784.87	1,577.61	28,649.85	30,402.75
Bituminous Soil Stabilization	.310	1,800.00	-	4,795.59	4,795.59
Storm Damage Repairs	.270	3,465.00	-	3,991.39	3,991.39
Grand Totals	99.898	$771,867.35	$28,154.05	$883,257.78	$924,519.72

RECAPITULATION (Sheet #2)

TOWNSHIP & BOROUGH AID ROADS UNDER CONSTRUCTION DECEMBER 31, 1945

Type	Mileage	State's Share	State and Municipal Share
Gravel	16.895	$ 78,489.97	$ 87,211.07
Gravel BST	.424	13,311.00	14,790.00
Gravel CaCl	.500	2,070.00	2,300.00
Gravel MIP	1.010	5,400.00	6,000.00
Bituminous Surface Treatment	.952	4,000.00	4,444.44
Bituminous Penetration Macadam	.745	35,910.00	39,899.99
Grading & Drainage	1.251	10,240.00	11,377.78
Bituminous Concrete	.584	19,800.00	22,000.00
Grand Totals	22.361	$169,220.97	$188,023.28

TOWNSHIP & BOROUGH AID APPLICATIONS APPROVED BUT WORK NOT STARTED DECEMBER 31, 1945

Type	Mileage	State's Share	State and Municipal Share
Gravel	385.82	$1,625,057.37	$1,805,618.73
Mixed in Place BST	.39	3,000.00	3,333.33
Bituminous Surface Treatment	10.44	32,022.00	35,579.99
Bituminous Penetration Macadam	81.53	1,132,420.41	1,258,244.70
Bituminous Concrete	53.40	697,547.94	775,053.13
Sheet Asphalt	2.30	94,230.00	104,699.99
Type "A" or "T"	73.76	1,010,987.93	1,123,319.70
Reinforced Concrete	8.29	283,438.21	314,931.34
Plain Concrete	2.66	195,270.47	216,967.18
Grading & Drainage	4.45	155,398.52	172,665.01
Bituminous Soil Stabilization	1.55	11,700.00	13,000.00
Bulkheads	-	6,700.00	7,444.44
Grand Totals	624.59	$5,247,772.85	$5,830,857.54

ANNUAL REPORT

OF THE

MAINTENANCE DIVISION

NEW JERSEY STATE HIGHWAY DEPARTMENT

FOR THE YEAR

1945

STATE OF NEW JERSEY
STATE HIGHWAY DEPARTMENT
TRENTON

REPORT OF SUPERINTENDENT OF MAINTENANCE FOR CALENDAR YEAR FROM JANUARY 1, 1945 TO DECEMBER 31, 1945

There is submitted herewith the report of the Maintenance Division for the calendar year from January 1, 1945 to December 31, 1945. Following out our previous procedure, a large part of the report is presented in theform of tables containing important information regarding the work of the Division. These tables may be used for direct comparisons with data for previous years.

Table No. 1 shows that there has been an increase of approximately 41.193 miles in the mileage under maintenance at the end of the year. This increase in mileage is primarily due to the mandatory assumption of maintenance on sections of Legislated State Highway Routes 6-A, 29 and 54. We are again carrying the same mileage of institutional roads as previously, in spite of the fact that there has been no real clarification of the status of township roads of record and other public roads within the limits of State Parks and Forests. There has been a very marked increase in the number of permits issued during the year; the increase being primarily since the cessation of hostilities.

Table No. 2, showing the schedule of mileages under maintenance, shows a number of changes; the greater portion of them being due to the assumption of additional mileages.

Table No. 3, which shows the major operations carried on during the year 1945, shows considerable increases in a number of items. Guard rail construction, in particular, shows a very large increase and represents a carry-over of a large amount of work

completely eliminated by war conditions. There is, however, still a large quantity of this type of work to be done as soon as the necessary materials, which are now on order, can be received. The painting of traffic lines also shows a considerable increase. Mud-jacking work also shows a very large increase. The repair of State Highway Routes 4 and 34 by reason of the heavy traffic to the Earle Naval Depot accounts for a large portion of this increase, and, in addition, the heavy mud-jacking work on the Admiral Wilson Boulevard at Camden, in cooperation with the widening project, has resulted in a further heavy increase. We, in addition, have cooperated to a considerable extent with Federal Agencies, in the performance of various work on Federal projects, with the result that there is a very heavy backlog of regular work to be performed during the coming year.

Table No. 4 shows the principal materials used by the Division during the year. It is notable that the quantity of liquid bitumens shows a tremendous increase over the previous year, indicating the large amount of shoulder and pavement treatment necessary to catch up with work deferred by reason of the war. Deferred guard rail work is also indicated in this table, where there is shown a very heavy increase in the number of guard rail posts used.

Table No. 5 is an analysis of maintenance costs by route and type of pavement. This table indicates that the average total cost per mile rose from $1,039.22 in 1944 to $1,281.76 in 1945. An analysis of this increase shows that while there has been a moderate increase in the cost of maintaining pavements, the greater part of the increase is due to materially increased costs on the shoulders and other factors outside the paved portion of the highway. This

increased cost largely represents deferred maintenance which it was possible to undertake due to the cessation of hostilities. It also, in part, represents considerable expenditures for the repair of damage, due to several very unusual storms. Unquestionably, also, the increase is the result of increased rates of pay for labor and other personnel as a result of the reclassification.

ORGANIZATION

There has been no material change in the general organization of the Division during the year. The lack of manpower was serious throughout the year, although it eased somewhat after the cessation of hostilities. The low point in hourly employment was in the second half of April, when the number of employees reached a low of 897. By the end of the year we had reached the maximum permitted under the budgetary setup, which setup was, however, inadequate to furnish the number of men which should have been employed in order to properly take care of our work.

BRIDGES

During the year we succeeded in improving materially the condition of some of the bridges on the Delaware and Raritan Canal. There is, however, still room for a vast amount of improvement in these bridges. There was serious damage to two bridges; one on the State Highway Route 24-28 Connecting Link near Phillipsburg, by reason of a cloudburst, and the other on State Highway Route #6 at Little Falls, due to a similar occurrence at another time.

SNOW REMOVAL

Snow removal and ice control operations were again set up on the basis of a military necessity. In spite of very heavy storms during the early months of the year, we were able to maintain traffic

on the State Highways without serious interruption. As was the case during the year 1944, we had heavy storms in December of 1945. The total expenditure for the year for snow removal and ice control amounted to $961,928,07, which is an all time high cost. Ice control alone represented approximately forty-three per cent of the total. While this was approximately ten per cent below the percentage for the previous year, it actually represented an increase in cost over the previous year. The number of miles included within the snow removal program for the year varied between a total of 1,655.487 miles for the first six months of the year and a total of 1,694.806 for the balance of the year.

SIGNS AND MARKINGS

Particularly during the latter months of the year, we were able to obtain some more permanent type signs, which enabled us to replace some of the temporary signs erected during the war. There are, however, still a considerable number of temporary signs in place, for which it has not been possible to obtain the materials for replacement. During the year 7,033 cautionary and directionary signs were refinished and, in addition, 9,938 route markers were refinished. The work at our Fernwood shop consisted of varying operations on a total of 4,565 signs. Traffic line work remained largely on a war time basis; all but a relatively small percentage of the line being four inch line as against the old standard of a minimum six inch line. Great difficulty was experienced in obtaining paint, due to material stringencies, with the result that the total footage painted during the year was approximately five per cent less than in the previous year. Both labor and material show marked increases for the year and there is, consequently, an increase in

the per foot per year cost from $0.00631 for the year 1944 to $0.00802 for the year 1945. It will be noted that while on a percentage basis the increase is considerable, the actual cost per foot per year is still on a very reasonable basis.

LANDSCAPING

With one notable exception, the landscaping work was confined practically entirely to maintenance operations. The one exception was the work on the Blue Star Drive on State Highway Route #29, where considerable progress was made in the setting up of this project. Here, as in all other types of operations, the shortage of manpower was a decidedly limiting factor.

PERMITS AND ENCROACHMENTS

No great progress was made in the removal of encroachments during the year, as a great part of those remaining involved materials and expenditures which were limited by war time conditions or required legal services which were not available to the Department. As indicated elsewhere, the cessation of hostilities immediately caused a very marked increase in the number of permits which it was necessary to handle. Indications are that a large backlog of deferred work and improvements will produce a record number of permits during the coming year.

RECOMMENDATIONS

A continuance of operations under the present fiscal and budgetary setups has made it clearly evident to me that the present fiscal setup is not ideally suited to the efficient carrying out of maintenance operations. It is, in my opinion, based on long experience in maintenance operations, not possible to absolutely determine how the maintenance moneys will be expended. There are

so many variable factors which can cause changes in the maintenance program that it has become more and more evident that the fiscal setup should be changed. It is, furthermore, in my opinion, unsound for a fiscal officer to determine that not more than a certain number of laborers should be employed in maintenance operations. There has been in evidence, furthermore, a lack of frankness in handling our fiscal problems. I am firmly of the opinion that efficiency of operation and the elimination of paper work would both be attained were the maintenance funds set up on a lump sum basis, to be expended as the need therefor develops in accordance with changing conditions. I feel that our fiscal reports will serve to keep the fiscal officers completely and thoroughly advised as to the expenditures made and that they will be in a position to call for an explanation on any item which would, in their opinion, require one. I would, therefore, strongly urge that every effort be made to obtain a lump sum setup of maintenance funds. In addition to this fact, it has heretofore been suggested that a maintenance reserve fund be accumulated, which would be available to meet emergencies. Our experience over the last few years clearly indicates the need for such a fund.

As has been noted elsewhere in this report, the shortage of manpower has been serious. It appears to me to be distinctly unsound for fiscal officers, having no practical knowledge of the operations of the Division, to set up maximum number of employees. It is true that there was at one time criticism in connection with large variations in employment. This criticism, however, applied primarily to a certain limited period of our operations. A study of employments shows that there is a natural seasonal variation.

The Department should, therefore, in my opinion, be permitted to employ such number of employees as are necessary for the carrying out of the operations at the time and in the vicinity where they may be required without hampering restrictions by fiscal authorities. I would, therefore, recommend that an endeavor be made to remove the present restrictions.

It is evident that there will be more and more pressure brought upon the Department to take over Legislated portions of the State Highway System not already under its jurisdiction. Our experience during the past year has indicated clearly, in some instances at least, that the authorities having jurisdiction over these stretches of highway have been consistently neglecting proper maintenance of the highways, knowing that ultimately jurisdiction must be transferred to the State Highway Department. It would appear to me that there should be some means of compelling the counties to properly maintain these highways until such time as the State can assume jurisdiction. At the present time most of the counties raise little or no money of their own for the maintenance of the county highways and depend almost entirely upon State funds for maintenance. It is, therefore, in my opinion, unsound for the Department to permit the neglect of Legislated State Highways, with a resulting aftermath of heavy expenditures from State maintenance funds to make up for county neglect. I would, therefore, recommend that this matter be studied for the purpose of working out some method of eliminating this condition.

Respectfully submitted,

alex. W.

Alex. W. Muir
Superintendent of Maintenance

TABLE NO. 1

1945

Total State Highways Under Maintenance	1,709.1941
Total Under Construction	4.7860
Total State Highway System	1,713.9801
Institutional Approaches and Interior Roads Under Maintenance	450.236

GENERAL

Service Station and Miscellaneous Permits	500
Opening and Pole Permits	981

TABLE No. 2 - 1945

SCHEDULE OF MILEAGES OF HIGHWAYS UNDER MAINTENANCE AS OF DECEMBER 31, 1945

Route	Concrete under Maintenance Miles	Macadam under Maintenance Miles	Gravel under Maintenance Miles	Sh.Asph: Bit.Conc under Maintenance Miles	Bit.Mac under Maintenance Miles	Stone Block under Maintenance Miles	Brick, Earth: Asph.Block: New R.O.W. Misc. under Maintenance Miles	Total under Maintenance Miles
1	*1 20.370			*1 5.278	0.090	*1 0.460	0.476	*1 26.674
S1	3.058			0.087				3.145
S1A	2.091							2.091
3	8.844			*2 0.3363	0.015			*2 9.1953
S3	2.562				0.049		3.307	5.918
4	*3 133.402		13.872	11.829	0.308		1.371	*3 160.782
S4	1.565							1.565
S4B							10.609	10.609
5	3.470			0.284				3.754
S5				0.691				0.691
6	*4 65.989			*4 7.113		*4 0.657	0.505	*4 74.264
6A	*5 11.771		*5 2.907	1.500	2.600		0.100	*5 18.878
S6	1.310			0.953				2.263
7	1.223			*6 3.8971		0.190		*6 5.3101
8	23.830				0.124			23.954
10	*7 19.189			3.797	0.043	1.287		*7 24.316
12	9.530				1.250			10.780
13E	0.029		0.107					0.136
17	*8 25.925			*8 0.276				*8 26.201
18							4.274	4.274
21	1.980			*9 3.373	0.087			*9 5.440
22	0.147							0.147

*1 0.794 Geo.Wash.Br.Appr; 1.424 Dual Hwy; 0.287 Elev.Hwy; 0.241 Parallel Hwy *2 0.0653 Par'l Hwy. *3 9.722 Conc.Resurf,Type A; 8.159 Dual Hwy; 5.669 Part Dual Hwy; 0.565 Victory Br. *4 8.107 Conc.Resurf,Type A; 6.203 Part Dual Hwy; 16.685 Dual Hwy; 1.531 Par'l Hwy. *5 1.333 Picatinny Ars.Acc.Rd; 0.597 Mixed in place. *6 0.373 Par'l Hwy. *7 10.779 Dual Hwy. *8 10.911 Dual Hwy; 0.276 Bit.Mac.Resurf,Type A. *9 0.200 Par'l Hwy.

T A B L E No. 2 - 1945

SCHEDULE OF MILEAGES OF HIGHWAYS UNDER MAINTENANCE AS OF DECEMBER 31, 1945

Route	Concrete under Maintenance Miles	Macadam under Maintenance Miles	Gravel under Maintenance Miles	Sh.Asph. Bit.Conc under Maintenance Miles	Bit.Mac under Maintenance Miles	Stone Block under Maintenance Miles	Brick, Earth: Asph. Block New R.O.W. Miscl. under Maintenance Miles	Total under Maintenance Miles
23	*10 39.275	*10 6.175		0.040	0.082		2.650	*10 48.222
24	24.730			7.164		0.231		32.125
S24	10.465			0.401	0.149			11.015
25	*11 90.122			*11 17.033	0.255	*11 4.973	*11 2.315	*11 114.698
25B				0.350				0.350
S25	0.453							0.453
26	*12 23.612			0.687				*12 24.299
S26	*13 1.549							*13 1.549
27	*14 21.753			21.639		0.690		*14 44.082
28	*15 53.302			*15 3.729			*15 8.721	*15 65.752
S28	7.615				0.315			7.930
29	*16 57.432			4.297	0.379		1.000	*16 63.108
29A	2.997							2.997
30	*17 47.160			0.303	0.500			*17 47.963
31	*18 50.615	3.458		0.787	1.256			*18 56.116
S31	14.570	2.300	2.600	0.048	0.201			19.719
32	*19 12.231			8.519				*19 20.750
33	*20 38.963			*20 2.940	0.265			*20 42.168
34	25.883			0.097				25.980
35	*21 52.624			*21 15.299	0.437		1.795	*21 70.155

*10 9.123 Dual Hwy; 2.743 Part Dual Hwy; 5.802 Shale Base. *11 23.785 Par'l overhead Ramps, Rotaries; 53.122 Dual & Part Dual Hwys; 0.422 Elevtd Hwy; 3.478 Pulaski Skyway; 2.908 conc.resurf, Type A. *12 20.587 Dual Hwy. *13 1.549 Dual Hwy. *14 Conc.resurf, Type A 17.931. *15 9.062 Par'l Hwy; 7.078 conc.resurf, Type A; 8.450 Dual Hwy; 1.762 Part Dual Hwy; 2.867 connecting link. *16 5.193 Par'l Hwy; 18.114 Dual Hwy; 0.585 Elevated Hwy; 1.300 conc.resurf, Type A. *17 2.380 Conc.resurf, Type A. *18 4.000 conc.resurf, Type A. *19 0.185 Par'l Hwy; 2.393 conc.resurf, Type A. *201.690 Par'l Hwy; 1.665 conc.resurf, Type A; 3.793 Part Dual Hwy. *21 0.216 Par'l Hwy; 6.677 Dual Hwy; 1.939 Part Dual Hwy; 0.831 Thomas Edison Bridge.

T A B L E No. 2 - 1945

SCHEDULE OF MILEAGES OF HIGHWAYS UNDER MAINTENANCE AS OF DECEMBER 31, 1945

Route	Concrete under Mainten-ance Miles	Macadam under Mainte-nance Miles	Gravel under Mainte-nance Miles	Sh.Asph. Bit.Conc under Mainten-ance Miles	Bit.Mac under Mainte-nance Miles	Stone Block under Mainten-ance Miles	Brick,Earth: Asph.Block New R.O.W. Miscl.under Maintenance Miles	Total under Mainten-ance Miles
36	*22 16.118						0.240	*22 16.358
37	*23 23.582		2.801	*23 0.719	1.038		1.360	*23 29.500
38	*24 16.801		3.364					*24 20.165
39	*25 33.855			6.834	0.521			*25 41.210
S39	*26 8.132							*26 8.132
40	*27 55.041			*27 3.052				*27 58.093
S40	23.190							23.190
41	9.001				0.389			9.390
S41	*28 18.768	1.340		0.520				*28 20.628
42	*29 42.921			*29 3.435				*29 46.356
43	47.869		*30 31.599					*30 79.468
44	*31 22.712	*31 2.436		*31 8.561	3.191		3.300	*31 40.200
S44	*32 1.785							*32 1.785
45	*33 30.110			3.512	0.930		0.241	*33 34.793
46	*34 20.667							*34 20.667
47	*35 42.748			11.059			0.500	*35 54.307
48	*36 34.315			*36 30.899				*36 65.214
49	*37 43.081		0.273	9.627			0.816	*37 53.797
S49	13.460							13.460
50	25.141			0.200				25.341

*22 1.202 Par'l Hwy; 3.555 Dual Hwy. *23 1.741 Dual Hwy. *24 5.615 Dual Hwy. *25 2.694 Par'l Hwy; 2.209 Dual Hwy; 3.371 Part Dual Hwy. *26 Fort Dix Access Rd; 3.684 Dual Hwy. *27 3.052 Par'l Hwy; 3.547 Dual Hwy. *28 8.058 Dual Hwy; 5.256 Part Dual Hwy. *29 3.296 Par'l Hwy; 5.391 Dual Hwy. *30 31.599 Par'l Hwy. *31 6.047 Par'l Hwy; 3.419 Conc.resurf, Type A. *32 Interstate Ferry Appr. *33 5.150 Conc.resurf, Type A. *34 1.000 Conc.resurf, Type A. *35 1.063 Conc.widening. *36 4.791 Par'l Hwy; 2.764 Dual Hwy. *37 0.192 Par'l Hwy; 0.150 Conc.resurf, Type A.

TABLE No. 2 - 1945.

SCHEDULE OF MILEAGES OF HIGHWAYS UNDER MAINTENANCE AS OF DECEMBER 31, 1945.

Route	Concrete under Maintenance Miles	Macadam under Maintenance Miles	Gravel under Maintenance Miles	Sh.Asph. Bit.Conc under Maintenance Miles	Bit.Mac under Maintenance Miles	Stone Block under Maintenance Miles	Brick, Earth: Asph.Block New R.O.W. Miscl.under Maintenance Miles	Total under Maintenance Miles
51	0.342		4.824					5.166
54			10.323					10.323
84	7.030							7.030
Totals	1448.305	15.709	72.670	201.1654	14.474	8.488	43.580	1804.3914
Miscl.	1.905			1.010	1.625		0.576	5.116
Totals	1450.210	15.709	72.670	202.1754	16.099	8.488	44.156	1809.5074
Inst. Appr.	0.663	1.200	4.927	1.000	10.809			18.599
Inst. Int.	1.055	15.850	320.212	8.450	49.500		36.570	431.637
Inst. Totals	1.718	17.050	325.139	9.450	60.309		36.570	450.236
Grand Total	1451.928	32.759	397.809	211.6254	76.408	8.488	80.726	2259.7434

TABLE NO. 3 - MAJOR OPERATIONS CARRIED ON DURING 1945

Route	Construction Jobs	Macadam: Bit.Mac Surfac. Sq.Yds.	Sewers & Drains Lin. Ft.	Conc-Surface Square Yards	Shoulders Resurfac. Square Yards	Guard Rail Construction Lin. Feet	Metal Signs & Posts Erected		Wooden Posts	Wood Signs Erected		Stop Street Signs		Route Markers		Bridge Activities Jobs			Mud-Jack Sq.Yd.	Refl. Signs (Red) Erec.	Traffic Lines Lineal Feet				Misc. Paving Sq.Yds.
							Signs	Posts		Plain	Button	Plain	Button	N.J.	U.S.	Maj	Min	Paint			4"	6"	8"	12"	
1						900	9	5		13	2		3	7	3			1	280	5	47,985	3,720	81,840	4,346	
S1						1,500				3		2	1	2						1	30,068	350	450	445	
S1A						200	1	1					2	1							10,032	1,385	9,504		
3						500			2	20	6	1		6			1			2	60,021	2,150	42,976	4,054	
S3								2	26	5	31		2	24			1			19	11,256		700		
4	1		519	98	100	4,860	43	3		19			12	9		2	13	3	14,210	12	434,601	8,216	97,201	4,629	
S4										1				2							8,184		3,104		
5													2	3							15,048		1,848		
6			318				294	12	9	20	3	3	9	9	8		3	1	3,015	23	381,880	7,398	60,892	895	
6A					6,540	5,290		3	87	83	66		34	75						6	92,673		1,000		
S6														18											
7													3	2						1	28,248	5,450	12,144	1,752	
8					7,950			3					2	3						2		60			
10					1,250		2	4	3	3	7	3	1	5			3			6	6,864	2,280	200	661	100
12						940				1	2	2								2		1,910		95	
17							9	8		1	9	4	6	4					1,260	7	131,361	10,264	39,486	2,274	
21							2			3										1	16,058	1,048	528	2,362	
23					7,960			5		17	4	8	4	9			1		240	8		2,722		998	
24			192				1	1		53	3	2	7	4			1		40	6	107,754	2,015	13,992	835	
S24								3	4		6		1	2						3	34,532		13,960		
25			412			4,640	24	10	13	36	14	7	12	24	20	2	8	2	25,200	36	1,069,651	65,580	125,709	3,614	705
26			264				3	4		7	4	2	3	3		1	4	2		4	159,259	1,760	3,912	204	2,200
S26							1	2																	
27					666		5	3		5		1	3	5	4					4	104,520	22,265	18,944	2,340	
28						5,150	114	7	9	7	9		5	10	9	1				9	282,526	5,886	19,844	452	675
S28			828	41				1		1			1	2						3	48,171	1,730	12,672	30	
29	1 *1			700		2,180	24	8	30	19	30		16	43			1		200	9	296,497	4,326	14,806	1,062	
30			1,100				6	2		6	7	2	2	3						12	191,599	9,285	13,728	743	
31			428		160		5	3	3	9	6	3		2						2	143,600	4,895	792	2,535	48
S31					4,500	6,400	2						1	4						1					
32								1				4	3	4						5	71,132	1,580	600	850	
33							2	3		4	5		5	6	6					4	138,713	5,801	20,407	2,642	
34			716			3,300	3	6	3	1	4	2	3	4			1		11,740	6	64,416		3,960	2,190	75
35	2		40			8,560	5	5	12	9	9	6	4	14		3	5		200	22	463,108	6,040	96,163	7,336	
36			252			8,500	6	2		8	3		1	1			1			2	78,341	2,615	5,808	494	
37						1,300	1	1		5	1	3		3		1	3		120		64,672	1,450	1,078	146	
38				600			20	4	9		7		3	2						3		1,800		172	
39							1	2			4	6		5			1			5	160,606	785	5,424	600	
S39								4	7	17	13		4	48						9					
40							6	1		5	2	3		2					200	3	79,872		4,016		
S40												1													
41							1			1		3					2			6	14,502	300	530	690	
S41							6	3		7	3		3	3						4					
42							4	6			7		2	12						8	246,045	4,330	43,275	731	
43							5	4		1	3		6	6	6					11	206,654	6,885	76,824	3,774	
44					24,600	2,000	10	5		2	26	2	5	5			9			9	181,561	2,100	8,982	799	
S44							1																		
45							8	2				3		2	9				410	3	78,169	4,056	84,976	1,415	
46							1					2		2						1					
47	1 *2						2			6			3	5						1	15,048	4,193	1,584	50	
48							2	9			9	1	1	10	6					12	64,142	2,125	11,718	84	
49								2				3	6	1			2		1,934	2	5,864	750			
S49								2														425			
50												2	1	3							6,072	250	465		
51									5	3	2		2	1						3					
54									14	12	8		9	54						7					
84					3,600		2			2		2		3											
Total	5		5,069	1,439	57,326	55,920	631	155	236	414	285	86	196	477	71	12	60	9	59,049	310	5,651,305	210,180	956,042	56,299	3,803 *4
Misc.							405									2 *3	17 *3	2 *3	11,538 *4			159,049		52,537	
Total	5		5,069	1,439	57,326	55,920	1,036	155	236	414	285	86	196	477	71	14	77	11	70,587	310	5,651,305	369,229	956,042	108,836	3,803
Inst.		*5																							
Int.		26,762	3,340			300																			
Grand Total	5	26,762	8,409	1,439	57,326	56,220	1,036	155	236	414	285	86	196	477	71	14	77	11	70,587	310	5,651,305	369,229	956,042	108,836	3,803

REMARKS: *1 - Memorial Planting Blue Star Drive   *2 - WPA Reserve   *3 - Ten jobs on D & R Canal Bridges

*4 - U. S. QMC Depot, Somerville   *5 - Bituminous Concrete and Modified Penetration

TABLE NO. 4 - MATERIAL REPORT YEAR 1945

Route	Broken Stone Tons	Broken Slag Tons	Road Gravel Yards	Concrete Gravel Tons	Sand Tons	Bit.Surf. Treat.&Pen. Gallons	Lignin Binder Gals.	Bit. Cold Patch and Jt. Fillers Gallons	Bit. Conc.& Sheet Asphalt Tons	Paving Blocks Quantity	Cement Bags	Lumber Board Feet	Paint Gallons	Calcium Chloride Tons	Cinders Yards	Common Brick Quant.	Drain & Culvert Pipe All Sizes	Guard Rail Posts Quant.	Wood Piling Pieces
1	1,307.53			.9	12	8,584		8,450	308		255				1,184	1,800	40	14	
S1	50.				1.5	7,671		1,375			8				206				
S1A	45					2,058		1,320			18								
3	684.26							4,478										1,458	
S3								3,629							207				
4	2,340.75	1,253.29	13,587	41.35	378.05	287,909		68,383	204	400	170	72,864			1,395	7,500	433	386	381
S4				5	3.93			879			35					1,000	140		
5	162.06				2			1,650	5		30				372		200		
6	7,049.72		22	21	19.95	19,571		15,162	148	300	159	499		5	3,931		16	1,611	
S6	135							3,006	19						170			200	
6A			1,826					2,613							117				
7	505							1,482			10				371				
8	410		1,532					1,498										553	
10	1,489.575		8	5	3			3,270	160		14				1,067			678	
12	198.45							2,416							63				
17	491.95					47,796		6,367	30		12				2,850			667	
18			546														100		
21	365.1							877	10						215			656	
23	3,847.7		1,053					6,090	28		48				2,187			1,453	
24	1,521.67		154	13.66	5.385			4,316			65	231		6	1,465			775	
S24	11		36					1,822				166		2	442			18	
25	645.8		2,221	44	53.3	78,509		37,196	1,390	1,550	5,701	6,869		13.05	2,720	550	20	44	
26	629.9				15.05	1,767		4,255			140	3,640		6	164	2,300	148	6	
27	2,549.15					34,241		3,449	350		5	3,449			353				
28	1,482.675			89.35	50.3	2,667		9,885	4,333		570	242		12	4,368		12		
S28	15				49.75	20,454		4,554				5,766			372	3,000	828		
29	2,906.21		12		46.85	19,362		10,857	1,460		71				787		48	218	
29A															14				
30	1,269.35		94	30.65	15.55			7,743	1,083		163			11.75	256				
31	2,513.355							5,787	30					5	931				
S31	170		2,594					6,442							118				
32	2,465.7					24,084		3,311			4				168			210	
33	265.7		1,611			15,953		9,647							124				
34	906.565		1,898	2	20.75	10,943		5,367			470				60		2,850		
35	3,406.277		5,088	50.3	424.65			29,278	65		330	39,914			135			856	256
36	16.25		317	1	1			6,106			8				317				
37	42		3,252	6	4	12,522		4,009			24	57,066			84			76	
38	20		1,630		23.64	68,884		3,454			225				114				
39			3,984			137,554		8,878			21			1	264				
S39			59												180				
40			5,258	24	11	6,935		3,208			75					1,000	96	20	
S40			1,034				80,042	887											
41	40		740			29,657		1,799							55				
S-41			547			8,755		4,741							114			1,190	
42	37		1,068			126,990		4,482							110				
43	26.59		319		20.7			17,221			210								
44	1,488.1		3,592	29.6	117.05	141,462		23,022	4,832		1,502	2,381			290				
45	46.65		1,713			76,055		12,009	3,400						505		52		
46	81.85		5,429			130,311		9,422	735						90				
47	140.6		3,340	264.9	305.443	206,249		13,253			2,500	10,440			155	30,000	5,628	12	
48	2,746.25		2,851			203,999		25,038							125				
49	181.9		1,611			52,327		17,618	110	550		3,100			110				
S49	24		1,427	12	8	60,231		3,597			80					2,500			
50	42.35		563			45,291		1,842											
51								520							60				
54	103.7	1,285.51		109.1		64,249	8,159	2,392											
84	717.9							538				196							
Inst.	7,961.775		7,422	355.44	723.41	286,982		64,384	3,041		2,552	4,413		25		24,600	2,108		
D&R Canal	273.4											45,961							87
Misc.				25.75	32.15						18		28,657	1.75					
Totals	53,830.762	2,538.80	78,438	1,131.00	2,348.408	2,240.022	88,201	505,274	21,741	2,800	15,493	257,197	28,657	88.55	29,385	74,250	11,127	11,101	724

ANALYSIS OF 1945 ROAD MAINTENANCE COST BY ROUTES, TYPE OF PAVEMENT AND CLASS OF WORK

TABLE NO. 5

ORDINARY MAINTENANCE:
M-1 Work on surface - travelled width.
M-2 Work on paved shoulders.
M-3 Work on drains, ditches, unpaved shoulders.
M-4 Work on guard rails and fences.
Const.- Cost incurred on jobs not maintained for FULL year.

EXTRAORDINARY REPAIRS:
E-5 Resurfacing, rebuilding, heavy patching - main pavement.
E-6 Rebuilding paved shoulders.
E-7 Rebuilding drains, new ditching, rebuilding unpaved shoulders.
E-8 Replacing guard rails and fences.

	Class of Work	CONCRETE		BITUMINOUS CONCRETE STONE BASE		BITUMINOUS CONCRETE CONCRETE BASE		STONE BLOCK		MACADAM		GRAVEL		BITUMINOUS MACADAM		BRICK		DIRT, CINDERS, ETC.		TOTAL	
		TOTAL COST	COST PER MILES	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE
Rt.	Miles	20.129		2.989		1.330		.422						1.049				.476		26.395	
1	M-1	$ 2,254.64	$ 112.01	$ 6,212.53	$ 2,078.46	$ 728.57	$ 547.80	$ 214.82	$ 509.05	$	$	$	$	$ 130.21	$ 124.13	$	$	$	$	$ 9,540.77	$ 361.46
	M-2	1,065.32	52.92			21.57	16.22							106.35	101.38			30.29	63.64	1,223.53	46.35
	M-3	10,526.54	522.95	1,731.36	579.23	635.08	477.50	891.56	2,112.70					110.21	105.06			112.70	236.76	14,007.45	530.69
	M-4	341.66	16.97	107.11	35.83	2.70	2.03							45.90	43.76					497.37	18.84
	E-5	5,607.83	278.59	71.31	23.86			409.23	969.74											6,088.37	230.66
	E-7	4,900.52	243.46											390.19	371.96					5,290.71	200.44
	E-8			31.06	10.39									74.45	70.97					105.51	4.00
	Const.																				
	Total	24,696.51	1,226.90	8,153.37	2,727.79	1,387.92	1,043.55	1,515.61	3,591.49					857.31	817.26			142.99	300.40	36,753.71	1,392.44
S-1	Miles	3.058				.087														3.145	
	M-1	126.68	41.43			34.52	3,967.82													161.20	51.26
	M-2	4,163.37	1,361.47																	4,163.37	1,323.81
	M-3	1,918.15	627.26																	1,918.15	609.90
	M-4	133.80	43.75																	133.80	42.54
	E-5	214.26	70.07																	214.26	68.13
	Const.																				
	Total	6,556.26	2,143.98			34.52	3,967.82													6,590.78	2,095.64
S-1A	Miles	2.091																		2.091	
	M-1	85.98	41.12																	85.98	41.12
	M-2	1,005.33	480.80																	1,005.33	480.89
	M-3	512.18	244.95																	512.18	244.85
	M-4	2.70	1.29																	2.70	1.29
	E-5	150.39	71.92																	150.39	71.92
	Const.																				
	Total	1,756.58	840.08																	1,756.58	840.08
3	Miles	8.844		.015		.065														8.924	
	M-1	1,158.27	130.97	78.32	5,221.33															1,236.59	138.57
	M-2	262.75	29.71																	262.75	29.44
	M-3	6,345.30	717.46																	6,345.30	711.04
	M-4	410.45	46.41																	410.45	45.99
	E-7	1,308.05	147.90																	1,308.05	146.58
	E-8	9,765.24	1,104.17																	9,765.24	1,094.27
	Const.																				
	Total	19,250.06	2,176.62	78.32	5,221.33															19,328.38	2,165.89
S-3	Miles	2.562												.049				3.115		5.726	
	M-1	267.85	104.55											25.61	522.65					293.46	51.25
	M-2	44.28	17.28																	44.28	7.73
	M-3	2,458.56	959.63															89.81	28.83	2,548.37	445.05
	M-4	735.88	287.23											2.33	47.55					738.21	128.92
	E-7	775.04	302.51																	775.04	135.35
	Const.																				
	Total	4,281.61	1,671.20											27.94	570.20			89.81	28.83	4,399.36	768.30
4	Miles	128.378		.085		18.509						13.872		3.971		.400				165.215	
	M-1	16,278.60	126.80	99.64	1,172.24	6,321.54	341.54					18,505.96	1,334.05	1,620.08	407.98	1,599.54	3,998.85			44,425.36	268.89
	M-2	4,602.27	35.85			62.37	3.37													4,664.64	28.23
	M-3	124,814.13	972.24			12,697.84	686.04					7,525.07	542.47	2,048.75	515.93	96.92	242.30			147,182.71	890.86
	M-4	834.55	6.50			170.22	9.20					117.69	8.48	7.44	1.87					1,129.90	6.84
	E-5	2,481.73	19.33			927.58	50.11					1,439.51	103.77							4,848.82	29.35
	E-7	27,898.41	217.31			13,927.68	752.48					3.85	.28	2,309.94	581.70					44,139.88	267.17
	Const.																				
	Total	176,909.69	1,378.03	99.64	1,172.24	34,107.23	1,842.74					27,592.08	1,989.05	5,986.21	1,507.48	1,696.46	4,241.15			246,391.31	1,491.34
S-4	Miles	1.565																		1.565	
	M-1	44.74	28.59																	44.74	28.59
	M-3	443.08	283.12																	443.08	283.12
	E-5	1.32	.84																	1.32	.84
	E-7	1,269.26	811.03																	1,269.26	811.03
	Const.																				
	Total	1,758.40	1,123.58																	1,758.40	1,123.58
S-4B	Miles																	16.109		16.109	
	M-3																	694.60	43.12	694.60	43.12
	M-4																	7.44	.46	7.44	.46
	E-7																	1,230.59	76.38	1,230.59	76.38
	Const.																				
	Total																	1,932.63	119.96	1,932.63	119.96
5	Miles	3.470				.975														4.445	
	M-1	356.23	102.66			77.44	79.43													433.67	97.56
	M-2	88.11	25.39																	88.11	19.82
	M-3	1,130.11	325.68			218.49	224.09													1,348.60	303.40
	M-4	372.90	107.46																	372.90	83.89
	E-7	8,985.12	2,589.37																	8,985.12	2,021.40
	Const.																				
	Total	10,932.47	3,150.56			295.93	303.52													11,228.40	2,526.07
6	Miles	62.172		5.400		5.911		.657								.114				74.254	
	M-1	6,146.28	98.86	3,087.50	571.76	2,397.81	405.65	43.63	66.41							991.95	8,701.32			12,667.17	170.59
	M-2	3,377.62	54.33	24.72	4.58															3,402.34	45.82
	M-3	26,112.36	420.00	1,188.06	220.01	1,542.46	260.95	10.65	16.21											28,853.55	388.58
	M-4	2,967.71	47.73	138.87	25.72	173.59	29.37	1.89	2.88											3,282.06	44.20
	E-5	4,349.35	69.96	2,287.85	423.67															6,637.20	89.39
	E-6	3.91	.06																	3.91	.05
	E-7	10,650.85	171.31	24,707.56	4,575.48	1,808.33	305.92	219.90	334.70											37,386.64	503.50
	E-8	12,961.24	208.47																	12,961.24	174.55
	Const.																				
	Total	66,569.32	1,070.72	31,434.58	5,821.22	5,922.19	1,001.89	276.07	420.20							991.95	8,701.32			105,194.11	1,416.68

ANALYSIS OF 1945 ROAD MAINTENANCE COST BY ROUTES, TYPE OF PAYMENT AND CLASS OF WORK

ORDINARY MAINTENANCE:
M-1 Work on surface - travelled width.
M-2 Work on paved shoulders.
M-3 Work on drains, ditches, unpaved shoulders.
M-4 Work on guard rails and fences.
Const.-Cost incurred on jobs not maintained for FULL year.

EXTRAORDINARY REPAIRS:
E-5 Resurfacing, rebuilding, heavy patching - main pavement.
E-6 Rebuilding paved shoulders.
E-7 Rebuilding drains, new ditching, rebuilding unpaved shoulders.
E-8 Replacing guard rails and fences.

	Class of Work	CONCRETE		BITUMINOUS CONCRETE STONE BASE		BITUMINOUS CONCRETE CONCRETE BASE		STONE BLOCK		MACADAM		GRAVEL		BITUMINOUS MACADAM		BRICK		DIRT, CINDERS, ETC.		TOTAL	
		TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE
Rt.	Miles	1.396		0.867																2.263	
S-6	M-1	$ 400.31	$ 286.76	$ 622.74	$ 718.27	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$ 1,023.05	$ 452.08
	M-3	22.57	16.17																	22.57	9.97
	M-4	10.03	7.18																	10.03	4.43
	E-5	50.94	36.49	4.40	5.07															55.34	24.45
	E-7	19.25	13.79	514.58	593.52															533.83	235.90
	Const.																				
	Total	503.10	360.39	1,141.72	1,316.86															1,644.32	726.83
6-A	Miles	11.661				1.550						2.310		2.600		0.300		0.597		19.018	
	M-1	537.50	46.09			190.37	122.82					196.63	85.12	132.86	51.10	22.66	75.53	109.38	183.22	1,189.40	62.54
	M-2					87.07	56.17													87.07	4.58
	M-3	6,556.51	562.26			943.46	608.68					1,024.28	443.41	2,195.33	844.36			142.45	238.61	10,862.03	571.14
	M-4	323.91	27.78									7.44	3.22					2.60	4.35	333.95	17.56
	E-5																	15.02	25.16	15.02	.79
	E-7	3,490.94	299.37			211.67	136.56							1,003.90	386.11			204.21	342.06	4,910.72	258.21
	E-8	761.01	65.26																	761.01	40.02
	Const.																				
	Total	11,669.87	1,000.76			1,432.57	924.23					1,228.35	531.75	3,332.09	1,281.57	22.66	75.53	473.66	793.40	18,159.20	954.84
7	Miles	1.223				3.897		0.190												5.310	
	M-1	41.25	33.73			336.60	86.37	11.17	58.79											389.02	73.26
	M-3	263.22	215.22			460.40	118.14	27.13	142.78											750.75	141.38
	M-4	4.66	3.81																	4.66	.88
	E-5					334.67	85.88	38.06	200.33											372.73	70.19
	E-7					70.42	18.07													70.42	13.26
	Const.																				
	Total	309.13	252.76			1,202.09	308.46	76.36	401.90											1,587.58	298.97
8	Miles	23.830												0.124						23.954	
	M-1	974.11	40.88											42.08	339.35					1,016.19	42.42
	M-2	30.61	1.28																	30.61	1.28
	M-3	8,146.27	341.85											63.22	509.84					8,209.49	342.72
	M-4	595.66	25.00											12.72	102.58					608.38	25.40
	E-7	5,452.87	228.82																	5,452.87	227.64
	E-8	3,039.85	127.56																	3,039.85	126.90
	Const.																				
	Total	18,239.37	765.39											118.02	951.77					18,357.39	766.36
10	Miles	19.189		3.797				1.201						0.043						24.230	
	M-1	1,761.44	91.79	614.10	161.73			633.30	527.31					26.53	616.98					3,035.37	125.28
	M-2	1,795.30	93.56																	1,795.30	74.09
	M-3	9,265.04	482.83	3,078.50	810.77			828.54	689.87											13,172.08	543.63
	M-4	477.76	24.90	36.57	9.63															514.33	21.23
	E-5	5.16	.27					279.64	232.84											284.80	11.75
	E-7	3,714.28	193.56	8,530.95	2,246.76															12,245.23	505.37
	E-8	5,144.55	268.10																	5,144.55	212.32
	Const.																				
	Total	22,163.53	1,155.01	12,260.12	3,228.89			1,741.48	1,450.02					26.53	616.98					36,191.66	1,493.67
12	Miles	9.530												1.250						10.780	
	M-1	135.15	14.18											683.55	546.84					818.70	75.95
	M-3	1,600.11	167.90											838.34	670.67					2,438.45	226.20
	E-7	455.16	47.76											1,104.08	883.26					1,559.24	144.64
	E-8	38.91	4.09																	38.91	3.61
	Const.																				
	Total	2,229.33	233.93											2,625.97	2,100.77					4,855.30	450.40
13-B	Miles	.029										.107								.136	
	E-7											66.19	618.60							66.19	486.69
	Const.																				
	Total											66.19	618.60							66.19	486.69
17	Miles	25.925												.276						26.201	
	M-1	1,256.07	48.45											14.89	53.95					1,270.96	48.51
	M-2	13,979.63	539.23											120.63	437.06					14,100.26	538.16
	M-3	7,926.30	305.74																	7,926.30	302.52
	M-4	1,023.52	39.48																	1,023.52	39.06
	E-5	1,650.73	63.67																	1,650.73	63.00
	E-7	6,105.18	235.49																	6,105.18	233.01
	E-8	1,550.28	59.81																	1,550.28	59.17
	Const.																				
	Total	33,491.71	1,291.87											135.52	491.01					33,627.23	1,283.43
18	Miles											4.274								4.274	
	M-3											295.06	69.04							295.06	69.04
	E-7											2,536.91	593.56							2,536.91	593.56
	Const.																				
	Total											2,831.97	662.60							2,831.97	662.60
21	Miles	1.980		.200		3.173								.087						5.440	
	M-1	332.72	168.04			305.55	96.30							317.36	3,647.82					955.63	175.67
	M-3	1,401.77	707.96			726.95	229.10													2,128.72	391.31
	M-4	121.04	61.13																	121.04	22.25
	E-7	501.12	253.09																	501.12	92.12
	E-8	1,582.65	799.32																	1,582.65	290.92
	Const.																				
	Total	3,939.30	1,989.54			1,032.50	325.40							317.36	3,647.82					5,289.16	972.27
22	Miles	.147																		.147	
	Const.																				
	Total																				

ANALYSIS OF 1945 ROAD MAINTENANCE COST BY ROUTES, TYPE OF PAVEMENT AND CLASS OF WORK

Schedule #13-B

ORDINARY MAINTENANCE:
M-1 Work on surface - travelled width.
M-2 Work on paved shoulders.
M-3 Work on drains, ditches, unpaved shoulders.
M-4 Work on guard rails and fences.
Const.-Cost incurred on jobs not maintained for FULL year.

EXTRAORDINARY REPAIRS:
E-5 Resurfacing, rebuilding, heavy patching - main pavement.
E-6 Rebuilding paved shoulders.
E-7 Rebuilding drains, new ditching, rebuilding unpaved shoulders.
E-8 Replacing guard rails and fences.

	Class of Work	CONCRETE		BITUMINOUS CONCRETE STONE BASE		BITUMINOUS CONCRETE CONCRETE BASE		STONE BLOCK		MACADAM		GRAVEL		BITUMINOUS MACADAM		BRICK		DIRT, CINDERS, ETC.		TOTAL	
		TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE
Rt.	Miles	39.275				.040				8.765				.082						48.162	
23	M-1	$ 5,293.71	$ 134.78	$	$	$ 282.61	$ 7,065.25	$	$	$ 1,615.72	$ 184.34	$	$	$ 150.18	$1,831.46	$	$	$	$	$ 7,342.22	$ 152.45
	M-2	236.58	6.02																	236.58	4.91
	M-3	14,401.81	366.69			12.20	305.00			3,348.33	382.01									17,762.34	368.80
	M-4	1,604.70	40.86			5.20	130.00			113.92	13.00			4.84	59.03					1,728.66	35.89
	E-5	245.44	6.25																	245.44	5.10
	E-6	141.27	3.60																	141.27	2.93
	E-7	14,843.13	377.93							2,215.86	252.81									17,058.99	354.20
	E-8	1,160.93	29.56							6,010.46	685.73									7,171.39	148.90
	Const.																				
	Total	37,927.57	965.69			300.01	7,500.25			13,304.29	1,517.89			155.02	1,890.49					51,686.89	1,073.18
24	Miles	24.730		2.299		4.865		.231												32.125	
	M-1	2,552.17	103.20	1,342.01	583.74	1,140.91	234.51	14.72	63.72											5,049.81	157.19
	M-2	29.44	1.19			105.35	21.66													134.79	4.20
	M-3	9,964.96	402.95	1,491.59	648.80	502.22	103.23	73.68	318.53											12,032.35	374.55
	M-4	969.96	39.22																	969.96	30.19
	E-5	220.49	8.92																	220.49	6.86
	E-6																				
	E-7	8,450.98	341.73	537.99	234.01	17.27	3.55	208.58	902.94											9,214.82	286.84
	E-8	1,430.86	57.86																	1,430.86	44.54
	Const.	22.75																		22.75	
	Total	23,641.61	955.07	3,371.59	1,466.55	1,765.75	362.95	296.88	1,285.19											29,075.83	904.37
S-24	Miles	10.465		.149		.401														11.015	
	M-1	2,647.12	252.95	58.78	394.50															2,705.90	245.66
	M-2	154.88	14.80																	154.88	14.06
	M-3	4,217.20	402.98																	4,217.20	382.86
	M-4	121.67	11.63																	121.67	11.05
	E-5	272.62	26.05																	272.62	24.75
	E-7	742.52	70.95																	742.52	67.41
	E-8	996.59	95.23																	996.59	90.47
	Const.																				
	Total	9,152.60	874.59	58.78	394.50															9,211.38	836.26
25	Miles	86.812		12.305		8.394		4.973						.255				2.012		114.751	
	M-1	17,574.47	202.44	7,964.23	647.23	16,122.75	1,920.75	4,593.36	923.66					2,214.34	8,683.69					48,469.15	422.38
	M-2	1,687.50	19.44																	1,687.50	14.71
	M-3	80,026.58	921.84	8,059.84	655.01	6,016.73	716.79	7,621.21	1,532.52											101,724.36	886.48
	M-4	1,782.66	20.53	167.44	13.61			94.94	19.09					3.78	14.82					2,048.82	17.85
	E-5	59,518.80	685.61			1,890.52	225.22	3,421.38	687.99					6.81	26.70					64,837.51	565.03
	E-7	8,129.89	93.65	150.14	12.20	94.31	11.23	29.56	5.94					67.75	265.69					8,471.65	73.83
	E-8	261.16	3.01			222.24	26.48	19.52	3.93					24.37	95.57					527.29	4.59
	Const.																				
	Total	168,981.06	1,946.52	16,341.65	1,328.05	24,346.55	2,900.47	15,779.97	3,173.13					2,317.05	9,086.47					227,766.28	1,984.87
26	Miles	25.161				.687														25.848	
	M-1	5,383.08	213.95			194.60	283.26													5,577.68	215.79
	M-2	507.22	20.16																	507.22	19.62
	M-3	16,683.22	663.06			331.18	482.07													17,014.40	658.25
	M-4	294.35	11.70																	294.35	11.39
	E-5	15.62	.62																	15.62	.60
	E-6	198.38	7.88																	198.38	7.68
	E-7	5,264.81	209.24																	5,264.81	203.68
	Const.																				
	Total	28,346.68	1,126.61			525.78	765.33													28,872.46	1,117.01
27	Miles	18.205		.821		23.916		1.140												44.082	
	M-1	1,607.27	88.29	1,237.50	1,507.31	24,186.77	1,011.32	201.77	176.99											27,233.31	617.79
	M-2	83.51	4.59	58.26	70.96	319.79	13.37													461.56	10.47
	M-3	5,331.33	292.85	400.03	487.25	7,426.91	310.54	244.91	214.83											13,403.18	304.05
	M-4	217.97	11.97																	217.97	4.94
	E-5	704.79	38.71			918.54	38.41													1,623.33	36.83
	E-7	1,102.79	60.58			2,791.23	116.71													3,894.02	88.33
	Const.																				
	Total	9,047.66	496.99	1,695.79	2,065.52	35,643.24	1,490.35	446.68	391.82											46,833.37	1,062.41
28	Miles	50.645		.208		6.012										.166		6.852		63.883	
	M-1	8,176.53	161.45	5.73	27.55	2,469.51	410.76									378.90	2,282.53			11,030.67	172.67
	M-2	1,106.27	21.84			59.60	9.91													1,165.37	18.25
	M-3	21,403.50	422.62	94.31	453.41	1,973.85	328.32											204.14	29.79	23,675.80	370.61
	M-4	360.41	7.12			34.32	5.71													394.73	6.18
	E-5	35,664.46	704.20																	35,664.46	558.28
	E-7	11,536.27	227.79															25.11	3.66	11,561.38	180.98
	E-8	169.81	3.35																	169.81	2.66
	Const.																	100.55	14.68	100.55	1.57
	Total	78,417.25	1,548.37	100.04	480.96	4,537.28	754.70									378.90	2,282.53	329.80	48.13	83,763.27	1,311.20
S-28	Miles	7.615												.315						7.930	
	M-1	1,475.43	193.75											277.07	879.58					1,752.50	220.99
	M-2	6,231.72	818.35																	6,231.72	785.84
	M-3	4,383.46	575.63											.69	21.90					4,384.15	552.86
	E-5	449.40	59.02																	449.40	56.68
	E-7	26,332.23	3,457.94																	26,332.23	3,320.58
	Const.																				
	Total	38,872.24	5,104.69											277.76	881.78					39,150.00	4,936.95

Schedule #13-C

ANALYSIS OF 1945 ROAD MAINTENANCE COST BY ROUTES, TYPE OF PAVEMENT AND CLASS OF WORK

ORDINARY MAINTENANCE:
M-1 Work on surface - travelled width.
M-2 Work on paved shoulders.
M-3 Work on drains, ditches, unpaved shoulders.
M-4 Work on guard rails and fences.
Const.-Cost incurred on jobs not maintained for FULL year.

EXTRAORDIANRY REPAIRS:
E-5 Resurfacing, rebuilding, heavy patching - main pavement.
E-6 Rebuilding paved shoulders.
E-7 Rebuilding drains, new ditching, rebuilding unpaved shoulders.
E-8 Replacing guard rails and fences.

	Class of Work	CONCRETE		BITUMINOUS CONCRETE STONE BASE		BITUMINOUS CONCRETE CONCRETE BASE		STONE BLOCK		MACADAM		GRAVEL		BITUMINOUS MACADAM		BRICK		DIRT, CINDERS, ETC.		T O T A L	
		TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE
Rt.	Miles	57.432		3.149		.668								1.859						63.108	
29	M-1	$ 12,593.26	$ 219.27	$ 171.54	$ 54.47	$ 175.19	$ 262.26	$	$	$	$	$	$	$ 47.43	$ 25.51	$	$	$	$	$ 12,987.42	$ 205.80
	M-2	4,964.30	86.44																	4,964.30	78.66
	M-3	30,020.63	522.72	406.13	128.97	109.17	163.43							801.64	431.22					31,337.47	496.57
	M-4	1,217.38	21.20											15.00	8.07					1,232.38	19.53
	E-5	14,489.19	252.28																	14,489.19	229.59
	E-7	13,807.86	240.42	229.69	72.95															14,037.55	222.44
	E-8	1,380.00	24.03																	1,380.00	21.87
	Const.																				
	Total	78,472.52	1,366.36	807.36	256.39	284.36	425.69							864.07	464.80					80,428.31	1,274.46
29-A	Miles	2.997										.852								3.849	
	M-3	417.72	139.38																	417.72	108.53
	Const.																				
	Total	417.72	139.38																	417.72	108.53
30	Miles	45.660		0.283		0.020								0.500						46.463	
	M-1	5,514.92	120.78	257.28	909.12	31.54	1,577.00							559.01	1,118.02					6,362.75	136.94
	M-2	2,226.92	48.77																	2,226.92	47.93
	M-3	19,152.90	419.47	309.78	1,094.63									170.70	341.40					19,633.38	422.56
	M-4	414.26	9.07																	414.26	8.92
	E-5	8,501.75	186.20											721.71	1,443.42					9,223.46	198.51
	E-7	7,082.36	155.11											50.88	101.76					7,133.24	153.53
	E-8	128.93	2.82																	128.93	2.77
	Const.																				
	Total	43,022.04	942.22	567.06	2,003.75	31.54	1,577.00							1,502.30	3,004.60					45,122.94	971.16
31	Miles	50.615		1.980						3.458				0.063						56.116	
	M-1	1,769.35	34.96	600.85	303.46					1,361.96	393.86			57.49	912.54					3,789.65	67.53
	M-2	111.16	2.19																	111.16	1.98
	M-3	14,238.83	281.32	195.68	98.83					912.67	263.90									15,347.08	273.49
	M-4	438.53	8.66	12.78	6.46					25.08	7.25									476.39	8.49
	E-5									220.23	63.69									220.23	3.93
	E-7	10,358.74	204.66	92.97	46.95															10,451.71	186.25
	Const.																				
	Total	26,916.61	531.79	902.28	455.70					2,519.34	728.70			57.49	912.54					30,396.22	541.67
S-31	Miles	14.570		0.048						2.300		2.600		0.201						19.719	
	M-1	468.74	32.17	30.70	639.58					717.53	311.99	343.77	132.22	531.30	2,643.28					2,092.09	106.10
	M-3	5,293.07	363.28							602.72	262.05	389.14	149.67							6,284.93	318.72
	M-4	418.85	28.75	2.60	54.17					10.04	4.37	48.06	18.49	7.44	37.02					486.99	24.70
	E-7	2,609.15	179.06							86.39	37.56	1,415.37	544.37							4,110.91	208.47
	Const.																				
	Total	8,789.81	603.28	33.30	693.75					1,416.73	615.97	2,196.34	844.75	538.74	2,680.30					12,974.92	657.99
32	Miles	9.838		2.588		8.324														20.750	
	M-1	1,487.46	151.20	2,370.54	915.90	5,473.32	657.53													9,331.12	449.69
	M-2					115.11	13.83													115.11	5.55
	M-3	3,307.83	336.23	1,403.77	542.41	3,527.11	423.73													8,238.71	397.05
	M-4	196.41	19.96	2.70	1.04	35.70	4.29													234.81	11.32
	E-5	3.44	.35																	3.44	.16
	E-7	3,090.53	314.14	1,021.35	394.65	2,360.93	283.63													6,472.81	311.94
	E-8	383.80	39.01			45.15	5.42													428.95	20.67
	Const.																				
	Total	8,469.47	860.89	4,798.16	1,854.00	11,557.32	1,388.43													24,824.95	1,196.38
33	Miles	37.298		1.200		3.670														42.168	
	M-1	1,504.06	40.33	309.80	258.17	538.06	146.61													2,351.94	55.78
	M-2	117.26	3.14			43.36	11.81													160.62	3.81
	M-3	19,688.30	527.87	922.38	768.65	717.60	195.53													21,328.26	505.79
	M-4	1,578.33	42.32																	1,578.33	37.43
	E-5	25.52	.68																	25.52	.60
	E-7	7,701.09	206.47			4.54	1.24													7,705.63	182.74
	E-8	145.09	3.89																	145.09	3.44
	Const.																				
	Total	30,759.67	824.70	1,232.18	1,026.82	1,303.56	355.19													33,295.41	789.59
34	Miles	25.883				.097														25.980	
	M-1	678.79	26.23																	678.79	26.23
	M-3	26,736.34	1,032.97																	26,736.34	1,032.97
	M-4	76.06	2.94																	76.06	2.94
	E-5	1,451.14	56.06																	1,451.14	56.06
	E-7	4,574.80	176.75																	4,574.80	176.75
	Const.																				
	Total	33,517.13	1,294.95																	33,517.13	1,294.95
35	Miles	51.775		2.210		14.418								.437				.133		68.975	
	M-1	12,543.28	242.26	498.32	225.48	14,041.91	973.91							414.99	949.63					27,498.50	398.67
	M-2	51.59	1.00			33.75	2.34													85.34	1.24
	M-3	23,514.73	454.17	274.96	124.42	4,882.55	338.64							82.95	189.77			36.09	271.35	28,791.26	417.43
	M-4	1,200.28	23.18			130.27	9.04													1,330.55	19.29
	E-5	32.50	.63			193.09	13.39							463.39	1,060.39					688.98	9.99
	E-7	13,838.72	267.28			1,339.82	92.93													15,178.54	220.06
	E-8	3,549.38	68.55			725.80	50.34													4,275.18	61.98
	Const.																				
	Total	54,730.48	1,057.07	773.28	349.90	21,347.19	1,480.59							961.31	2,199.79			36.09	271.35	77,848.35	1,128.66

Schedule #13-D

ANALYSIS OF 1945 ROAD MAINTENANCE COST BY ROUTES, TYPE OF PAVEMENT AND CLASS OF WORK

ORDINARY MAINTENANCE:
M-1 Work on surface - travelled width.
M-2 Work on paved shoulders.
M-3 Work on drains, ditches, unpaved shoulders.
M-4 Work on guard rails and fences.
Const.-Cost incurred on jobs not maintained for FULL year.

EXTRAORDINARY REPAIRS:
E-5 Resurfacing, rebuilding, heavy patching - main pavement.
E-6 Rebuilding paved shoulders.
E-7 Rebuilding drains, new ditching, rebuilding unpaved shoulders.
E-8 Replacing guard rails and fences.

	Class of Work	CONCRETE		BITUMINOUS CONCRETE STONE BASE		BITUMINOUS CONCRETE CONCRETE BASE		STONE BLOCK		MACADAM		GRAVEL		BITUMINOUS MACADAM		BRICK		DIRT, CINDERS, ETC.		T O T A L	
		TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE
Rt.	Miles	16.146		.260																16.386	
36	M-1	$ 1,825.75	$ 113.07	$ 50.76	$ 211.50	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$ 1,876.51	$ 114.52
	M-3	7,787.50	482.32	13.62	56.75															7,801.12	476.08
	M-4	8.57	.53																	8.57	.52
	E-7	410.71	25.44	196.80	820.50															607.51	37.07
	Const.																				
	Total	10,032.53	621.36	261.18	1,088.25															10,293.71	628.19
37	Miles	23.582				.719						2.801		1.038						28.140	
	M-1	967.35	41.02			202.67	281.88					7,563.91	2,700.43	198.78	191.50					8,932.71	317.44
	M-2	134.36	5.69																	134.36	4.77
	M-3	17,645.15	748.25			1,248.75	1,736.78					1,533.90	547.63	323.62	311.77					20,751.42	737.43
	M-4	299.00	12.68																	299.00	10.63
	E-5	95.42	4.05																	95.42	3.39
	E-7	5,081.10	215.46																	5,081.10	180.57
	E-8	793.01	33.63																	793.01	28.18
	Const.																				
	Total	25,015.39	1,060.78			1,451.42	2,018.66					9,097.81	3,248.06	522.40	503.27					36,087.02	1,282.41
38	Miles	16.801										3.364								20.165	
	M-1	1,976.46	117.64									9,446.92	2,808.24							11,423.38	566.50
	M-2	28.57	1.70																	28.57	1.42
	M-3	17,885.38	1,064.54									1,410.19	419.20							19,295.57	956.88
	E-5	130.09	7.74																	130.09	6.45
	E-7	292.76	17.43									88.05	26.17							380.79	18.88
	E-8	866.81	51.59																	866.81	42.99
	Const.																				
	Total	21,180.07	1,260.64									10,945.14	3,253.61							32,125.21	1,593.12
39	Miles	33.855		6.585		.249								.521						41.210	
	M-1	823.43	24.32	435.46	66.13	29.02	116.55							38.36	73.63					1,326.27	32.18
	M-2	5,280.01	155.96																	5,280.01	128.12
	M-3	42,955.50	1,268.81	2,209.21	335.49	7.19	28.87							392.63	753.61					45,564.53	1,105.67
	M-4	162.92	4.81	184.49	28.02															347.41	8.43
	E-5	17.78	.53	11.47	1.74															29.25	.71
	E-7	1,422.40	42.01	68.03	10.33															1,490.43	36.17
	E-8			3.74	.57															3.74	.09
	Const.																				
	Total	50,662.04	1,496.44	2,912.40	442.28	36.21	145.42							430.99	827.24					54,041.64	1,311.37
S-39	Miles	8.132																		8.132	
	M-1	41.86	5.15																	41.86	5.15
	M-3	4,737.73	582.60																	4,737.73	582.60
	E-7	1,256.78	154.55																	1,256.78	154.55
	Const.																				
	Total	6,036.37	742.30																	6,036.37	742.30
40	Miles	55.041		3.052																58.093	
	M-1	1,413.32	25.68	233.06	76.36															1,646.38	28.34
	M-2	1,102.15	20.02																	1,102.15	18.97
	M-3	48,728.45	885.31																	48,728.45	838.81
	M-4	520.79	9.46																	520.79	8.96
	E-5	454.42	8.26																	454.42	7.82
	E-6	263.20	4.78																	263.20	4.53
	E-7	6,702.76	121.78																	6,702.76	115.38
	E-8	2,073.47	37.67																	2,073.47	35.69
	Const.																				
	Total	61,258.56	1,112.96	233.06	76.36															61,491.62	1,058.50
S-40	Miles	23.190																		23.190	
	M-1	558.00	24.06																	558.00	24.06
	M-3	33,092.28	1,427.00																	33,092.28	1,427.00
	M-4	85.72	3.70																	85.72	3.70
	E-7	1,166.42	50.30																	1,166.42	50.30
	Const.																				
	Total	34,902.42	1,505.06																	34,902.42	1,505.06
41	Miles	9.001												.389						9.390	
	M-1	515.64	57.28											183.50	471.72					699.14	74.46
	M-2	14.90	1.66																	14.90	1.58
	M-3	7,900.08	877.69											113.00	290.49					8,013.08	853.36
	M-4	28.21	3.13											58.51	150.41					86.72	9.24
	E-7	90.18	10.02																	90.18	9.60
	Const.																				
	Total	8,549.01	949.78											355.01	912.62					8,904.02	948.24
S-41	Miles	18.768		.520						1.340										20.628	
	M-1	500.91	26.69	61.29	117.86					110.08	82.15									672.28	32.59
	M-2	39.90	2.13																	39.90	1.93
	M-3	19,333.06	1,030.11	292.20	561.92					312.34	233.09									19,937.60	966.53
	M-4	216.13	11.52																	216.13	10.48
	E-5	1.10	.06																	1.10	.05
	E-7	310.49	16.54																	310.49	15.05
	E8	2,194.82	116.94																	2,194.82	106.40
	Const.																				
	Total	22,596.41	1,203.99	353.49	679.78					422.42	315.24									23,372.32	1,133.08

ANALYSIS OF 1945 ROAD MAINTENANCE COST BY ROUTES, TYPE OF PAVEMENT AND CLASS OF WORK

Schedule #13-E

ORDINARY MAINTENANCE:
M-1 Work on surface - travelled width.
M-2 Work on paved shoulders.
M-3 Work on drains, ditches, unpaved shoulders.
M-4 Work on guard rails and fences.
Const.-Cost incurred on jobs not maintained for FULL year.

EXTRAORDINARY REPAIRS:
E-5 Resurfacing, rebuilding, heavy patching - main pavement.
E-6 Rebuilding paved shoulders.
E-7 Rebuilding drains, new ditching, rebuilding unpaved shoulders.
E-8 Replacing guard rails and fences.

Rt.	Class of Work	CONCRETE		BITUMINOUS CONCRETE STONE BASE		BITUMINOUS CONCRETE CONCRETE BASE		STONE BLOCK		MACADAM		GRAVEL		BITUMINOUS MACADAM		BRICK		DIRT, CINDERS, ETC.		T O T A L	
		TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE
42	Miles	42.921				3.435														46.356	
	M-1	$ 2,674.42	$ 62.31	$	$	$ 267.69	$ 77.93	$	$	$	$	$	$	$	$	$	$	$	$	$ 2,942.11	$ 63.47
	M-2	5,390.40	125.59																	5,390.40	116.28
	M-3	40,999.55	955.23			1,950.35	567.79													42,949.90	926.52
	M-4	424.02	9.88																	424.02	9.15
	E-5	31.41	.73																	31.41	.68
	Const.																				
	Total	49,519.80	1,153.74			2,218.04	645.72													51,737.84	1,116.10
43	Miles	47.869										15.800								47.869	
	M-1	11,313.03	236.33									3,151.59	199.47							14,464.62	302.17
	M-2	49.95	1.04									1,961.71	124.16							2,011.66	42.02
	M-3	22,380.01	467.53									1,343.97	85.06							23,723.98	495.60
	M-4	408.61	8.54																	408.61	8.54
	E-7	2,523.10	52.71																	2,523.10	52.71
	Const.																				
	Total	36,674.70	766.15									6,457.27	408.69							43,131.97	901.04
44	Miles	24.497		8.561						2.435				3.191				3.203		41.887	
	M-1	5,134.69	209.60	15,708.27	1,834.86					1,180.12	484.64			4,256.92	1,334.04					26,280.00	627.40
	M-2	672.55	27.45	7.55	.88															680.10	16.23
	M-3	30,485.58	1,244.46	6,602.84	771.27					306.73	125.97			2,577.16	807.65					39,972.31	954.29
	M-4	424.29	17.32											514.00	161.08					938.29	22.40
	E-5	20,726.19	846.07	78.51	9.17									7,989.90	2,503.89					28,794.60	687.44
	E-7	8,623.18	352.01	157.84	18.43					1,417.99	582.34			2,528.62	792.42					12,727.63	303.86
	Const.																				
	Total	66,066.48	2,696.91	22,555.01	2,634.61					2,904.84	1,192.95			17,866.60	6,599.06					109,392.98	2,611.62
45	Miles	29.592		4.119										.930						34.641	
	M-1	4,806.63	162.43	3,228.70	783.86									149.82	161.10					8,185.15	236.28
	M-2	699.85	23.65	41.70	10.12															741.55	21.41
	M-3	23,426.17	791.60	2,820.02	684.64									43.50	46.77					26,288.69	758.89
	M-4	22.71	.77																	22.71	.66
	E-5	29,534.13	998.04	1,667.26	404.77															31,201.39	900.71
	E-7	25.71	.87																	25.71	.74
	Const.																				
	Total	58,514.20	1,977.36	7,757.68	1,883.39									193.32	207.87					66,465.20	1,918.69
46	Miles	20.667																		20.667	
	M-1	3,234.32	156.50																	3,234.32	156.50
	M-3	31,619.09	1,529.93																	31,619.09	1,529.93
	M-4	846.84	40.98																	846.84	40.98
	E-5	5,743.65	277.91																	5,743.65	277.91
	E-7	10,156.05	491.41																	10,156.05	491.41
	Const.																				
	Total	51,599.93	2,496.73																	51,599.93	2,496.73
47	Miles	42.784		11.058												.500				54.342	
	M-1	4,344.76	101.55	1,422.47	128.64											327.29	654.58			6,094.52	112.15
	M-3	46,922.91	1,096.74	10,641.52	962.33											32.34	64.68			57,596.77	1,059.89
	M-4	90.14	2.11																	90.14	1.66
	E-7	235.71	5.51																	235.71	4.34
	Const.																				
	Total	51,593.52	1,205.91	12,063.99	1,090.97											359.63	719.26			64,017.14	1,178.04
48	Miles	34.315		8.303		16.080														58.698	
	M-1	3,269.92	95.29	3,664.40	441.33	9,652.28	600.26													16,586.60	282.58
	M-2	71.78	2.09																	71.78	1.22
	M-3	28,369.08	826.73	7,853.68	945.88	19,351.27	1,203.44													55,574.03	946.78
	M-4	337.75	9.84																	337.75	5.75
	E-5	88.17	2.57	88.17	10.62															176.34	3.00
	E-7	377.20	10.99	1,047.66	126.18															1,424.86	24.27
	Const.																				
	Total	32,513.90	947.51	12,653.91	1,524.01	29,003.55	1,803.70													74,171.36	1,263.60
49	Miles	43.081		.313		9.880						.896				.250				54.420	
	M-1	3,638.56	84.46	70.65	225.72	1,299.94	131.57					654.75	730.75			309.72	1,238.88			5,973.62	109.77
	M-2	49.86	1.16																	49.86	.92
	M-3	28,682.02	665.77			4,213.75	426.49					248.79	277.67			72.06	288.24			33,216.62	610.38
	M-4	88.87	2.06																	88.87	1.63
	E-5	6,403.19	148.63																	6,403.19	117.66
	E-7	396.69	9.21													23.95	95.80			420.64	7.73
	Const.																				
	Total	39,259.19	911.29	70.65	225.72	5,513.69	558.06					903.54	1,008.42			405.73	1,622.92			46,152.80	848.09
S-49	Miles	14.104																		14.104	
	M-1	481.66	34.15																	481.66	34.15
	M-3	18,614.02	1,319.77																	18,614.02	1,319.77
	M-4	24.20	1.72																	24.20	1.72
	E-7	800.47	56.75																	800.47	56.75
	Const.																				
	Total	19,920.35	1,412.39																	19,920.35	1,412.39
50	Miles	25.141				.200														25.341	
	M-1	1,563.52	62.19			113.76	568.80													1,677.28	66.19
	M-3	18,873.72	750.71			314.27	1,571.35													19,187.99	757.19
	M-4	4.59	.18																	4.59	.18
	E-7	.69	.03																	.69	.03
	E-8	.33	.01																	.33	.01
	Const.																				
	Total	20,442.85	813.12			428.03	2,140.15													20,870.88	823.60

ANALYSIS OF 1945 ROAD MAINTENANCE COSTS BY ROUTES, TYPE OF PAVEMENT AND CLASS OF WORK

ORDINARY MAINTENANCE:
M-1 Work on surface - travelled width.
M-2 Work on paved shoulders.
M-3 Work on drains, ditches, unpaved shoulders.
M-4 Work on guard rails and fences.
Const.-Cost incurred on jobs not maintained for FULL year.

EXTRAORDINARY REPAIRS:
E-5 Resurfacing, rebuilding, heavy patching - main pavement.
E-6 Rebuilding paved shoulders.
E-7 Rebuilding drains, new ditching, rebuilding unpaved shoulders.
E-8 Replacing guard rails and fences.

	Class of Work	CONCRETE		BITUMINOUS CONCRETE STONE BASE		BITUMINOUS CONCRETE CONCRETE BASE		STONE BLOCK		MACADAM		GRAVEL		BITUMINOUS MACADAM		BRICK		DIRT, CINDERS, ETC.		TOTAL	
		TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE
Rt.	Miles	.342																		.342	
51	M-1	$ 16.88	$ 49.36	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$ 16.88	$ 49.36
	M-3	10.10	29.53																	10.10	29.53
	Const.																	694.25		694.25	
	Total	26.98	78.89															694.25		721.23	78.89
54	Miles											7.163								7.163	
	M-1											22,256.46	3,107.14							22,256.46	3,107.14
	M-3											3,978.88	555.48							3,978.88	555.48
	E-7											223.21	31.16							223.21	31.16
	Const.																				
	Total											26,458.55	3,693.78							26,458.55	3,693.78
84	Miles	7.030																		7.030	
	M-1	2,439.81	347.06																	2,439.81	347.06
	M-3	2,691.71	382.89																	2,691.71	382.89
	M-4	149.94	21.33																	149.94	21.33
	E-7	488.55	69.49																	488.55	69.49
	Const.																				
	Total	5,770.01	820.77																	5,770.01	820.77

ANALYSIS OF 1945 ROAD MAINTENANCE COSTS BY ROUTES, TYPE OF PAVEMENT AND CLASS OF WORK

ORDINARY MAINTENANCE:
M-1 Work on surface - travelled width.
M-2 Work on paved shoulders.
M-3 Work on drains, ditches, unpaved shoulders.
M-4 Work on guard rails and fences.
Const.-Cost incurred on jobs not maintained for FULL year.

EXTRAORDINARY REPAIRS:
E-5 Resurfacing, rebuilding, heavy patching - main pavement.
E-6 Rebuilding paved shoulders.
E-7 Rebuilding drains, new ditching, rebuilding unpaved shoulders.
E-8 Replacing guard rails and fences.

Class of Work	CONCRETE		BITUMINOUS CONCRETE STONE BASE		BITUMINOUS CONCRETE CONCRETE BASE		STONE BLOCK		MACADAM		GRAVEL		BITUMINOUS MACADAM		BRICK		DIRT, CINDERS, ETC.		TOTAL	
	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE
Miles	1423.450		83.344		137.572		8.814		18.298		38.239		19.230		1.730		32.497		1763.174	
M-1	$ 164,968.40	$ 115.89	$ 50,436.97	$ 605.16	$ 86,614.93	$ 629.60	$ 5,712.77	$ 648.15	$ 4,985.46	$ 272.46	$62,119.99	$1,624.52	$12,072.36	$ 627.79	$3,630.06	$2,098.30	$ 109.38	$ 3.37	$ 390,650.32	$ 221.56
M-2	61,457.22	43.17	132.23	1.59	847.97	6.16					1,961.71	51.30	226.98	11.80			30.29	.93	64,656.40	36.67
M-3	1,001,362.60	703.48	49,989.50	599.80	69,809.78	507.44	9,697.58	1,100.25	5,482.69	299.63	17,749.28	464.17	9,761.72	507.63	201.52	116.37	1,279.79	39.38	1,165,334.26	660.93
M-4	23,391.35	16.43	652.56	7.83	552.00	4.01	96.83	10.98	149.04	8.15	173.19	4.53	671.96	34.94			10.04	.31	25,696.97	14.57
E-5	199,332.42	140.03	4,208.97	50.50	4,264.40	31.00	4,148.31	470.65	220.23	12.03	1,439.51	37.64	9,181.81	477.47			15.02	.46	222,810.67	126.37
E-6	606.76	.43																	606.76	.34
E-7	255,352.85	179.39	37,255.56	447.01	22,626.20	164.47	458.04	51.97	3,720.24	203.31	4,333.56	113.33	7,455.36	387.69	23.95	13.84	1,459.91	44.92	332,685.67	188.69
E-8	50,378.72	35.39	34.80	.42	993.19	7.22	19.52	2.21	6,010.46	328.48			98.82	5.14					57,535.51	32.63
Total	1,756,850.32		142,710.59		185,708.47		20,133.05		20,568.12		87,777.24		39,469.01		3,855.53		2,904.43		2,259,976.56	
Const.	22.75																794.80		817.55	
GRAND TOTAL	$1,756,873.07	$ 1,234.21	$142,710.59	$ 1,712.31	$185,708.47	$1,349.90	$20,133.05	$ 2,284.21	$20,568.12	$1,124.06	$87,777.24	$2,295.49	$39,469.01	$2,052.46	$3,855.53	$2,228.51	$3,699.23	$ 89.37	$2,260,794.11	$ 1,281.76

---- ANALYSIS OF 1945 ROAD MAINTENANCE COST BY ROUTE AND TYPE OF PAVEMENT ----

Schedule #13-G

ROUTE	TOTAL		CONCRETE		BITUMINOUS CONCRETE STONE BASE		BITUMINOUS CONCRETE CONCRETE BASE		STONE BLOCK		MACADAM		GRAVEL		BITUMINOUS MACADAM		BRICK		DIRT, CINDERS, ETC.	
NO.	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE	TOTAL COST	COST PER MILE
1	$ 36,753.71	$1,392.44	$ 24,696.51	$1,226.90	$ 8,153.37	$2,727.79	$ 1,387.92	$1,043.55	$ 1,515.61	$3,591.49	$	$	$	$	$ 857.31	$ 817.26	$	$	$ 142.99	$ 300.40
S-1	6,590.78	2,095.64	6,556.26	2,143.93			34.52	3,967.82												
S-1-A	1,756.58	840.08	1,756.58	840.08																
3	19,328.38	2,165.89	19,250.06	2,176.62	78.32	5,221.33														
S-3	4,399.36	768.30	4,281.61	1,671.20											27.94	570.20			89.81	28.83
4	246,391.31	1,491.34	176,909.69	1,378.03	99.64	1,172.24	34,107.23	1,842.74					27,592.08	1,989.05	5,986.21	1,507.48	1,696.46	4,241.15		
S-4	1,758.40	1,123.58	1,758.40	1,123.58																
S-4-B	1,932.63	119.96																	1,932.63	119.96
5	11,228.40	2,526.07	10,932.47	3,150.56			295.93	303.52												
6	105,194.11	1,416.68	66,569.32	1,070.72	31,434.53	5,821.22	5,922.19	1,001.89	276.07	420.20							991.95	8,701.32		
S-6	1,644.82	726.83	503.10	360.39	1,141.72	1,316.86														
6-A	18,159.20	954.84	11,669.37	1,000.76			1,432.57	924.23					1,228.35	531.75	3,332.09	1,281.57	22.66	75.53	473.66	793.40
7	1,587.58	298.97	309.13	252.76			1,202.09	308.46	76.36	401.90										
8	18,357.39	766.36	18,239.37	765.39											118.02	951.77				
10	36,191.66	1,493.67	22,163.53	1,155.01	12,260.12	3,228.89			1,741.48	1,450.02					26.53	616.98				
12	4,855.30	450.40	2,229.33	233.93											2,625.97	2,100.77				
13-E	66.19	486.69											66.19	618.60						
17	33,627.23	1,283.48	33,491.71	1,291.87											135.52	491.01				
18	2,831.97	662.60											2 ,831.97	662.60						
21	5,289.16	972.27	3,939.30	1,989.54			1,032.50	325.40							317.36	3,647.82				
22																				
23	51,686.89	1,073.18	37,927.57	965.69			300.01	7,500.25			13,304.29	1,517.89			155.02	1,390.49				
24	29,075.83	904.57	23,641.61	956.07	3,371.59	1,466.65	1,765.75	362.95	296.88	1,285.19										
S-24	9,211.38	836.26	9,152.60	874.59	58.78	394.50														
25	227,766.28	1,984.37	168,981.06	1,946.52	16,341.65	1,328.05	24,346.55	2,900.47	15,779.97	3,173.13					2,317.05	9,086.47				
26	28,872.46	1,117.01	28,346.68	1,126.61			525.78	765.33												
27	46,833.37	1,062.41	9,047.66	496.39	1,695.79	2,065.52	35,643.24	1,490.35	446.68	391.32										
28	85,765.27	1,311.20	78,417.25	1,548.37	100.04	480.96	4,537.28	754.70									378.90	2,282.53	329.80	48.13
S-28	39,150.00	4,936.95	38,872.24	5,104.69											277.76	881.78				
29	80,428.31	1,274.46	78,472.52	1,366.36	807.36	256.39	284.36	425.69							864.07	464.30				
29-A	417.72	108.53	417.72	139.38																
30	45,122.94	971.18	43,022.04	942.22	567.06	2,003.75	31.54	1,577.00							1,502.30	3,004.60				
31	30,396.22	541.67	26,916.61	531.79	902.28	455.70					2,519.84	728.70			57.49	912.54				
S-31	12,974.92	657.99	8,789.81	603.28	33.30	693.75					1,416.73	615.97	2,196.34	844.75	538.74	2,680.30				
32	24,824.95	1,196.38	8,469.47	860.89	4,798.16	1,854.00	11,557.32	1,388.43												
33	33,295.41	789.59	30,759.67	824.70	1,232.18	1,026.32	1,303.56	355.19												
34	33,517.13	1,294.95	33,517.13	1,294.95																
35	77,848.35	1,128.68	54,730.48	1,057.07	773.28	349.90	21,347.19	1,480.59							961.31	2,199.79			36.09	271.35
36	10,293.71	628.19	10,032.53	621.36	261.18	1,088.25														
37	36,087.02	1,282.41	25,015.39	1,060.78			1,451.42	2,018.66					9,097.31	3,248.06	522.40	503.27				
38	32,125.21	1,593.12	21,180.07	1,260.64									10,945.14	3,253.61						
39	54,041.64	1,311.37	50,662.04	1,496.44	2,912.40	442.23	36.21	145.42							430.99	827.24				
S-39	6,036.37	742.30	6,036.37	742.30																
40	61,491.62	1,058.50	61,258.56	1,112.96	233.06	76.36														
S-40	34,902.42	1,505.06	34,902.42	1,505.06																
41	8,904.02	948.24	8,549.01	949.78											355.01	912.62				
S-41	23,372.32	1,133.08	22,596.41	1,203.99	353.49	679.78					422.42	315.24								
42	51,737.84	1,116.10	49,519.30	1,153.74			2,218.04	645.72												
43	43,131.97	901.04	36,674.70	766.15									6,457.27	408.69						
44	109,392.98	2,611.62	66,068.48	2,696.91	22,555.01	2,634.61					2,904.34	1,192.95			17,866.60	5,599.06				
45	66,465.20	1,918.69	58,514.20	1,977.36	7,757.68	1,883.39									193.32	207.37				
46	51,599.93	2,496.73	51,599.93	2,496.73																
47	64,017.14	1,178.04	51,593.52	1,205.91	12,063.99	1,090.97											359.63	719.26		
48	74,171.36	1,263.60	32,513.90	947.51	12,653.91	1,524.01	29,003.55	1,803.70												
49	46,152.80	848.09	39,259.19	911.29	70.65	225.72	5,513.69	558.06					903.54	1,008.42			405.73	1,622.92		
S-49	19,920.35	1,412.39	19,920.35	1,412.39																
50	20,870.88	823.60	20,442.85	813.12			428.03	2,140.15												
51	721.23	78.89	26.98	78.89															694.25	
54	26,458.55	3,693.78											26,458.55	3,693.78						
84	5,770.01	820.77	5,770.01	820.77																
TOTAL	$2,260,794.11	$1,281.76	$1,756,873.07	$1,234.21	$142,710.59	$1,712.31	$185,708.47	$1,349.90	$20,133.05	$2,284.21	$20,568.12	$1,124.06	$87,777.24	$2,295.49	$39,469.01	$2,052.46	$3,855.33	$2,228.51	$3,699.23	$ 89.37

Total Mileage 1763.174

ANNUAL REPORT

OF THE

ELECTRICAL DIVISION

NEW JERSEY STATE HIGHWAY DEPARTMENT

◆

FOR THE YEAR

1945

ANNUAL REPORT

OF THE

ELECTRICAL DIVISION

NEW JERSEY STATE HIGHWAY

DEPARTMENT

* * *

FOR THE YEAR

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ANNUAL REPORT - 1945

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION

March 15, 1946

Commander Charles M. Noble
State Highway Engineer
State House Annex
Trenton 1, New Jersey

Dear Sir:

The Annual Report of the Electrical Division for the year 1945 is herewith respectfully submitted.

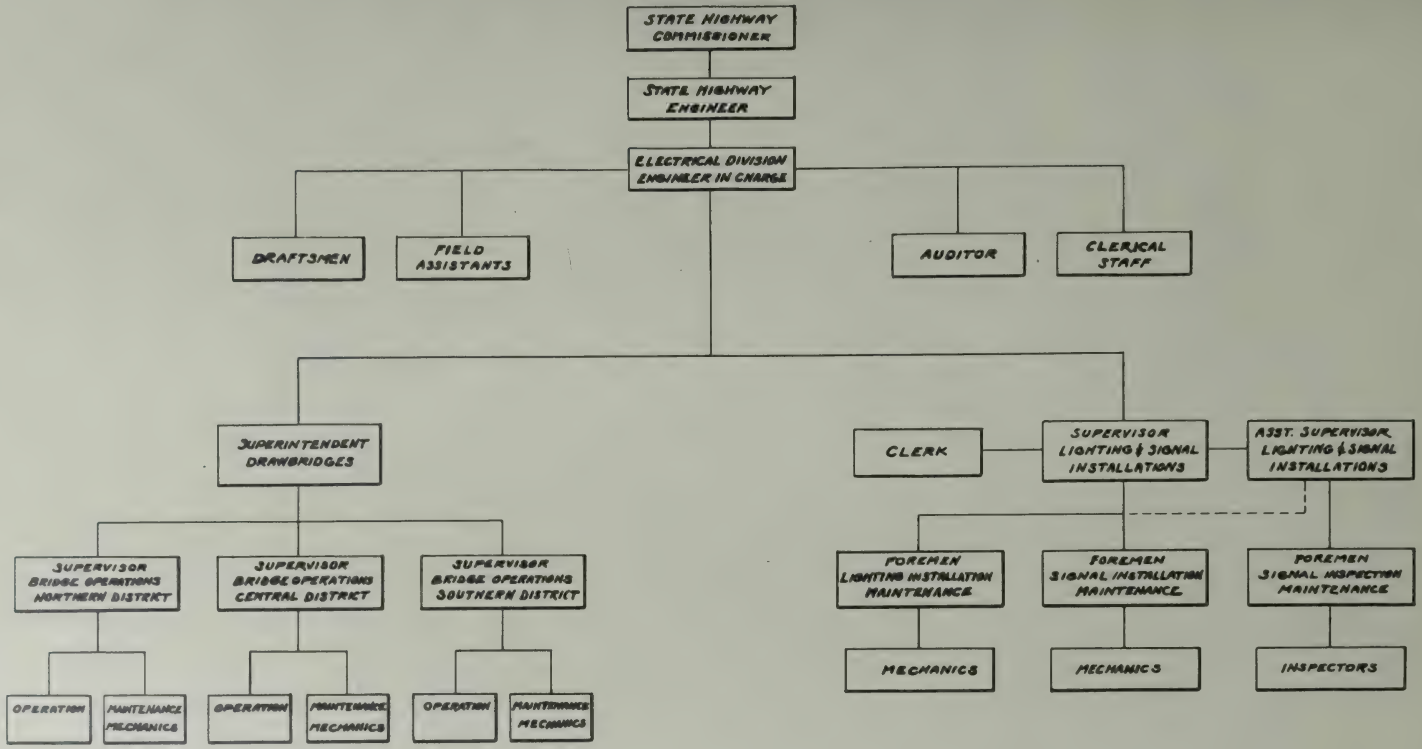
Principal activities of the Division throughout the year were the operation and maintenance of machinery of thirty-four movable span bridges, the maintenance of highway lighting, traffic signals, and electric cautionary and directional signs.

Increased night travel called for a comprehensive review of the War Emergency Lighting Curtailment Program, initiated in 1942. 1,078 highway lighting units were restored to service and 1,982 highway lighting units were increased in candle power or relocated to permit safer night travel on the State Highway system.

The traffic signal installation policy was modified to permit installation costs to be distributed on a more equitable basis. The traffic signal maintenance policy was revised whereby all maintenance would be undertaken by this Division and the involved municipality would be responsible for electric current operating costs only.

Respectfully submitted,

James L. Hays
James L. Hays
Engineer in Charge,
Electrical Division


STATE HIGHWAY COMMISSIONER
STATE HIGHWAY ENGINEER
ELECTRICAL DIVISION ENGINEER IN CHARGE
DRAFTSMEN
FIELD ASSISTANTS
AUDITOR
CLERICAL STAFF
SUPERINTENDENT DRAWBRIDGES
CLERK
SUPERVISOR LIGHTING & SIGNAL INSTALLATIONS
ASST. SUPERVISOR LIGHTING & SIGNAL INSTALLATIONS
SUPERVISOR BRIDGE OPERATIONS NORTHERN DISTRICT
SUPERVISOR BRIDGE OPERATIONS CENTRAL DISTRICT
SUPERVISOR BRIDGE OPERATIONS SOUTHERN DISTRICT
FOREMEN LIGHTING INSTALLATION MAINTENANCE
FOREMEN SIGNAL INSTALLATION MAINTENANCE
FOREMEN SIGNAL INSPECTION MAINTENANCE
OPERATION
MAINTENANCE MECHANICS
OPERATION
MAINTENANCE MECHANICS
OPERATION
MAINTENANCE MECHANICS
MECHANICS
MECHANICS
INSPECTORS

NEW JERSEY STATE HIGHWAY DEPARTMENT

ELECTRICAL DIVISION ORGANIZATION

1945

ANNUAL REPORT - 1945

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION

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NEW JERSEY STATE HIGHWAY DEPARTMENT

ELECTRICAL DIVISION

ORGANIZATION

The functions of the Electrical Division may be classified under the following captions:

A. ADMINISTRATION

B. ENGINEERING

C. DRAWBRIDGE OPERATION AND MACHINERY MAINTENANCE

D. HIGHWAY SAFETY LIGHTING PROGRAMS:

  (a) 100% State Lighting

  (b) County Reimbursement Lighting

  (c) Municipal Reimbursement Lighting

E. TRAFFIC SIGNAL CONSTRUCTION AND MAINTENANCE

F. ELECTRIC SIGN CONSTRUCTION AND MAINTENANCE

G. MISCELLANEOUS CONSTRUCTION AND MAINTENANCE

An organization chart of the Electrical Division is included in the preceding pages.

FINANCIAL REPORT

I. DIVISIONAL

Prior to 1944 Electrical Division appropriations had been made on a calendar yearly basis. The 1944 Annual Report included the budget appropriation from January 1, 1944 to June 30, 1945. Since funds are now made available on a fiscal year basis beginning July 1st of each year, they are no longer reported as a part of this report.

Total funds available for the fiscal year beginning July 1, 1945 amounted to $2,060,454.41. The 1945 expenditures and commitments amounted to $1,132,289.88 leaving a balance of $928,164.53 for the period of January 1 to June 30, 1946.

Expenditures and commitments for the year 1945 are given on page 13, followed on page 14 by a statement of the expenditures by work operation.

Comparison of expenditures and commitments for the years 1944-1945 on page 15 indicate an increase in operating expenses and expenditures as explained in the following paragraphs.

II. DRAWBRIDGES

Detailed expenditures for the operation of drawbridges are tabulated on page 16 and comparative operating costs for 1944-1945 on page 17. The increase in salaries can be attributed to:

(a) Additional bridges assigned by Legislation
(b) Increments and salary adjustments under the salary reclassification program.

With the $40,570.74 increase in the bridge operating salaries for the above reasons, there has been a decrease in operating expense of $8,700.00 (see page 17). Machine repair has increased slightly due to salary adjustment of bridge mechanics, but remains at $28,043.02 (Item 1B, page 14), which is far below required maintenance.

This decrease in operating costs has been caused by not having sufficient maintenance personnel, shortages of required materials and deferred maintenance.

III. HIGHWAY LIGHTING

Highway lighting costs increased in 1945 due to the restoration of highway safety lighting units reduced in candle power or removed from service during the War Emergency Program. 100% State installations required an additional sum of $23,832.23. The municipal and county highway lighting reimbursement aid increased $17,718.66.

Expenditures for highway safety lighting under the 100% State lighting and the County and Municipal programs are given in detail on pages 18 and 19.

IV. TRAFFIC SIGNALS AND ELECTRIC SIGNS

Comparison of expenditures, 1944-1945, (Item 3, page 15), shows a slight reduction in expenditures. Reduced operating current costs for traffic signals, (Item 3A, page 14), account for the decrease in this item.

REPORT OF OPERATIONS

DRAWBRIDGES

I. OPERATION

The following bridges were transferred to the State Highway Department during 1945 by Acts of the State Legislature:

(a) Rutherford Avenue Bridge, Passaic River
(b) Brigantine Bridge, Absecon Channel

Full time operation was discontinued at one location during 1945 - at Alloways Creek Bridge (Route 49, Quinton) which was transferred to the Highway Department on September 15, 1925. It was a hand-operated drawspan with a negligible number of boat openings. Application was made to the War Department to permit limited operation. On September 8, 1945, the War Department directed full time operation be discontinued and it be designated as a bridge requiring twenty-four hours advance notice for its operation. This arrangement will go into effect January 1, 1946.

Rutherford Avenue Bridge, built in 1912, was formerly operated jointly by Bergen and Passaic Counties. It is a center bearing swing draw with flexible cable power feed, swinging through one quadrant only, powered by 600 volt direct current, supplied by an alternating current motor-generator set installed alongside the operating house. The operating equipment was found to be in good working order, however, lacking several protective devices. Limit switches have been installed and, when procurable, interlocks will be installed to bring this bridge in uniformity with other bridges operated and maintained by this Division. The bridge has been classified in the Class II group. The seven man personnel transferred from the joint County payroll were allocated suitable titles and proper salary ranges by the Civil Service Commission.

The Brigantine Bridge approaches were demolished by the September 15, 1944 hurricane and the bridge is not in use. The double leaf bascule drawspan structure sustained no damage. The power equipment on the bascule spans has been completely overhauled, the control equipment salvaged and reconditioned, the power and control wiring designed. Installation of the operating equipment is awaiting completion of the two approaches, now under reconstruction.

During the year 1945, the thirty-six movable span bridges maintained and operated by the State were opened a total of 34,890 times for passage of marine traffic. This is an increase of 17% over 1944. It is significant to note that this was accomplished with no material delays to highway or marine traffic due to failure of operating machinery or control equipment.

On pages 20 to 23 there is presented a series of graphs depicting Number Bridge Openings and Hours Highway Traffic Delay by months for the year 1940 to 1945 inclusive. The first graph, page 20, giving data for all bridges, shows the continued effect of the war in reducing marine traffic, the graph being almost identical with that of previous years.

The second graph, page 21, shows bridge openings and highway traffic delay on Class I bridges. Bridges of this classification are located in the metropolitan areas of the State, spanning streams devoted almost exclusively to commercial navigation, and represent our larger and more important bridges. It is interesting to note that seasonal peaks in traffic on these rivers have substantially disappeared, indicating that the transportation of civilian goods and military supplies has continued the regular and even marine traffic pattern.

The graph on page 22 shows bridge openings and highway traffic delays on Class II bridges. These bridges are located in the northern part of the State where again the river traffic is predominently commercial and in the central coastal area of the State with both commercial and pleasure marine traffic.

On page 23 will be found graph for Class III bridges, which are situated, for the most part, on tributaries of the Delaware River and comprise our smaller and less important structures. The graphs clearly indicate a marked increase in the number of bridge openings over preceding years, and it is again attributed to the very large volume of marine traffic through the Cape May Canal.

II. PERSONNEL

In the 1943 Annual Report, a drawbridge personnel reclassification plan as approved by the Civil Service Commission was explained in detail. The objectives which the plan was expected to accomplish were set forth. Changes and reassignments to carry out this plan in the field were completed during 1945. The experience of one year's operation of the plan indicates that all the eight objectives are being realized.

Carrying out the implications of personnel classification, rules governing bridge operating personnel were compiled. A bound copy of these rules is placed on each bridge. In addition, there is included in the binding the War Department Rules of Navigation for the several districts, and informational material on power and control apparatus as used on drawbridges.

Since 1941, the supervision of the Northern District and general supervision of operation, maintenance and personnel, has been combined in one assignment in the field. The northern District includes the nine bridges in the Metropolitan area from Little Ferry to South Amboy. It had become increasingly apparent that these two functions involved too much work for one individual, also that the business of general supervision could not be adequately served in the field. The purely engineering aspects of that work were increased by the participation of the Electrical Division in discussions and recommendations relative to the design of power and control equipment on new bridges.

Accordingly, the functions were separated by the appointment of a Supervisor of Bridge Operation for the Northern District, and the creation of the position of Superintendent of Drawbridges in the Trenton office. Under this title are assigned the administrative and engineering functions of bridge operation, maintenance and personnel.

III. MAINTENANCE

As in 1944, drawbridge maintenance was held at a minimum by material scarcity and the frequent use of maintenance mechanics in bridge operation, to fill shortages in operating personnel. The latter situation is gradually improving as men become available with the closing of war industries and the return of service men. An increase in maintenance mechanic personnel is imperative in the near future, due to long delayed maintenance, the acquisition of bridges from counties, and anticipating the completion of bridges now under construction.

REPORT OF OPERATIONS (Continued)

HIGHWAY SAFETY LIGHTING

The State Highway Lighting Program continues on the established applications of

(a) 100% State
(b) County Reimbursement
(c) Municipal Reimbursement

Schedules of the number and candle power of the lighting units under the three classifications will be found on pages 39 to 59. The 1945 municipal and county safety lighting programs indicating the reimbursement cost in each municipality, or county, the revisions in number or intensity of highway safety lighting units as compared with 1943 and 1944 by Utility Companies, in addition to a table showing the number of units in operation from 1938-1945 are a part of these schedules.

The War Emergency Curtailment Program, initiated in 1942, caused the wartime discontinuance or reduction in intensity of many highway lighting units at critical locations. Commissioner Miller recognized this as a temporary measure and on July 13, 1944 sanctioned the re-establishment of highway lighting to its pre-war normal status at locations where traffic conditions warranted. After-dark travel on the State Highways exceeded expectations. Gasoline sales indicated an upward traffic trend to 25 and 30% over 1944 travel. To assist the night motoring public 1,078 highway lighting units were restored to service, 332 new units were added, and 771 units not in service were utilized as seasonal lighting from June to October on Route 43 and the Ocean City-Somers Point Bridge Road. 1,982 other units were revised in candle power or relocated to more serviceable locations.

Highway lighting units are installed at 279 locations as 100% State Lighting, and under reimbursement agreements in 201 municipalities and 20 counties. A total of 12,318 units are in operation as of December 31, 1945.

After the engineering work on a proposed highway lighting installation has been completed, recommendations are made to the State Highway Engineer indicating the nature of installation and method of effecting the particular type of program which will provide assistance to motorists to travel with greater safety at night time through the particular location on the State Highway under consideration. This work is static and requires periodic review to determine if the installations provide sufficient assistance. When these recommendations are approved by Commissioner Miller, negotiations are made with the involved municipality or county for reimbursement. Since the inception of the Highway Lighting Reimbursement Program, this Division has been confronted with regular annual reimbursement contract renewals which

entail considerable additional office work, consisting mainly of rewriting the reimbursement agreement for the previous year, preparing the same for commission action, the concomitant correspondence with the municipality or county involved and presenting the newly executed agreement which would run for one year for approval for the Commissioner's signature.

A study has been made to simplify the negotiation procedure. With the approval of the Attorney General's office, a new type of agreement which is annually self-renewing, has been developed. It is based upon the annual proposition that the Legislature appropriates the required funds and the municipality forwards a resolution indicating its request for reimbursement, to continue the lighting program as approved by the State Highway Commissioner. Other simplifications in office operating methods, will reduce the original work on lighting reimbursement agreements. Had this program been in effect on January 1, 1945, 30% of the reimbursement agreements would not require processing for 1946.

Comparisons of 1943, 1944 and 1945 lighting programs by utility companies indicating the number, candle power and revisions of lighting units under the three programs will be found on pages 39, 40, and 41. On page 42 there are presented tabulations of the 1945 County reimbursement agreements, the number and sizes of units together with the County, State and total operational cost for each County. Similarly, there are shown by Counties, on pages 43 to 59 corresponding data for each municipality participating in the municipal reimbursement program.

REPORT OF OPERATIONS (Continued)

HIGHWAY TRAFFIC SIGNALS

A total of 171 traffic signals or flashers are under the Division's maintenance program, embracing:

(a) 100% State, 32 signals or flashers at intersections of two or more State Highways and 29 signals at movable span bridges.

(b) County reimbursement, 51 signals or flashers at intersections of State Highways and County roads.

(c) Municipal Reimbursement, 49 signals at intersections of State Highways and municipal streets.

(d) Miscellaneous, 10 signals, including 7 locations at United States Government Posts; one agreement with Port of New York Authority; one agreement with Hudson County Boulevard Commission; and one maintenance agreement for a signal at intersecting Ocean County roads.

In addition to the above there are 13 traffic signals not maintained by this Division where we contribute to the current cost only. (See page 67).

During the year one prefixed time traffic signal was revamped, three manually operated signals and two flashers were installed. An agreement was entered into with Ocean County to service the County owned semi-actuated traffic signal at Ridgeway. The one remaining normal out semi-actuated signal was converted to permit normal green operation. Traffic signals at Routes 35 and 4N, Belmar, and Route 35 Edison Bridge, are not in operation due to the War Curtailment Program, while the traffic signal at Routes 48 and 50, Mays Landing, which had been disconnected on March 5, 1943, was restored to service on September 13, 1945.

A comprehensive study of proposed traffic signals required at forty-two hazardous locations disclosed the inequitable share of installation costs on the part of the municipality or county involved. Prior to June 16, 1945, the municipality or county shared the cost of installation with the State. An average of thirty-four (34) two-way crossing intersections reviewed indicated that over 75% of the traffic originated along or on the State highway. Over 85% of traffic was found on the State highway where a "T" street was involved. Commissioner Miller, as a result of this study, on June 16, 1945, approved the revision of the traffic signal reimbursement program, making installation costs proportionate to traffic volume. The State's share of installation costs now is 75% and the municipality or county

pays 25% for 2-way crossings. "T" street installations are made on the basis of the State assuming 85% of the cost, while the municipality is chargeable for only 15% of the costs. Other types of intersections are reviewed, and the cost is apportioned to the traffic volumes involved.

Traffic signal maintenance has heretofore been on the basis of the municipality maintaining all the equipment above the ground, except the controller. The underground equipment and controller were maintained by the State. The municipality relamped the signal, paid the current bill and was reimbursed up to 50% of the current cost by the State. Wartime limitations on local electrical maintenance in many municipalities resulted in traffic signal failures which could not be and were not corrected until the Electrical Division maintenance or repair crews appeared to remedy them. In addition, the Division's traffic signal inspectors were required to relamp equipment in numerous instances. The Electrical Division forces made regular and constant inspections of all traffic signal installations at two-week intervals. Several municipalities have the necessary equipment to properly maintain overhead traffic signals, including required equipment for painting, replacement of lamps, periodic cleaning of reflectors or lenses and repair in case of accidents. Others do not. Efficient operation of all traffic signals is paramount. The Electrical Division has the required equipment and especially trained personnel to handle all phases of traffic signal maintenance and repair. Future traffic signal installations will be made, with the arrangement that the municipality or county pay for the cost of operating current and the State will assume the entire cost of maintaining all equipment, both underground and overhead, the controller and necessary relamping. In the case of an existing installation, the municipality or county involved has been contacted for the purpose of revising the existing agreement, so that in these cases the municipality or county will operate on the same method, namely paying for the operating current, while the remainder of the equipment will be maintained by Electrical Division forces, thereby each signal will receive proper maintenance and repair. Forty maintenance agreements were revised during 1945.

During 1945 traffic signal manufacturers were engaged in war production. Repair or replacement parts could not be obtained through ordinary sources. Our traffic signal repair and maintenance crews in many cases exhibited ingenuity and high mechanical skill in the manner in which they repaired, replaced and improvised parts to keep existing traffic signals in constant operation. Wartime industrial traffic operating in three shifts caused traffic signals to operate under three times the normal load. This increased operation and wear has decreased the life of signal controller and equipment, increasing required maintenance and the number of inspections. The Electrical Division, during 1945, has built a new complete traffic signal maintenance and repair laboratory where the

various types of controllers or signal units can be overhauled, inspected and rebuilt.

On page 60 there is presented tabulation showing the number of various types of traffic signals in operation, together with data covering the routine inspections and emergency calls made during the year by our traffic signal maintenance forces. On pages 61 to 66 will be found a listing of all traffic signals maintained by the State, giving route numbers, location and type of signal.

ELECTRIC SIGNS

Electric cautionary and directional signs are installed and maintained by this Division at traffic circles and other points of convergent and divergent traffic. A total of 681 such signs - 155 cautionary and 526 directional - of which 354 are illuminated by incandescent lamps and 327 by fluorescent or neon type lighting are in operation. Two additional neon cautionary signs are under construction for use at Routes 6 and 6A, Dover.

On pages 68 and 69 will be found tables giving the route number, location, and type of all electric signs now in service. On page 70 are listed locations totaling 45 electric signs not yet placed in operation due to inability of utility companies to obtain necessary equipment or to make required pole line extensions under War Emergency restrictions.

As in the instance of traffic signals, replacement or repair parts required for illuminated traffic signs could not be procured from their sources. 95 illuminated sign repairs or replacements occurred during 1945. Signs which were damaged beyond repair were temporarily replaced with wooden sign boxes constructed by this Division's forces. These will be replaced by properly constructed equipment as soon as possible. The application of fluorescent lighting for the illumination of electrical cautionary and directional signs will incorporate many refinements during 1946. Several new types of facings are under consideration and will be tested to determine their suitability for use as a replacement of the present facing.

NEW JERSEY STATE HIGHWAY DEPARTMENT

ELECTRICAL DIVISION

SCHEDULE SHOWING EXPENDITURES AND COMMITMENTS FOR THE YEAR 1945

1.	OPERATION OF BRIDGES		
	A. Salaries, Coal Material, Machine Repair, Lighting & Power	$439,196.66	
	B. Commitments	5,797.19	$444,993.85
2.	HIGHWAY LIGHTING		
	A. Current, Maintenance & Installation (State)	195,447.21	
	B. Commitments	3,251.58	
	C. Municipal & County Aid	259,108.71	
	D. Commitments	106,922.62	564,730.12
3-4.	TRAFFIC SIGNALS & ELECTRIC SIGNS		
	A. Current, Maintenance & New Installations	91,398.55	
	B. Commitments	31,167.36	122,565.91
	TOTAL EXPENDITURES & COMMITMENTS		1,132,289.88
	Balance December 31, 1945		928,164.53
	TOTAL FUNDS AVAILABLE		$2,060,454.41

NEW JERSEY STATE HIGHWAY DEPARTMENT

ELECTRICAL DIVISION

STATEMENT OF EXPENDITURE FOR THE YEAR 1945 BY WORK OPERATION

1.	OPERATION AND MAINTENANCE OF BRIDGES		
	A. Operation	$393,654.73	
	B. Machine Repair	28,043.02	
	C. Lighting	17,498.86	$439,196.66
2.	HIGHWAY LIGHTING		
	A. Current (State)	188,103.94	
	B. Maintenance (State)	5,381.84	
	C. New Installations (State)	1,961.43	
	D. Municipal and County Aid	259,108.71	454,555.92
3.	TRAFFIC SIGNALS AND ELECTRIC BEACONS		
	A. Current	18,558.04	
	B. Maintenance	26,287.39	
	C. New Installations	11,700.58	56,545.71
4.	ELECTRIC DIRECTIONARY SIGNS		
	A. Current	17,268.97	
	B. Maintenance	17,222.01	
	C. New Installations	361.86	34,852.84
	TOTAL EXPENDITURE		985,151.13
	COMMITMENTS DECEMBER 31, 1945		147,138.15
	TOTAL EXPENDITURE & COMMITMENTS		$1,132,289.28

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION
COMPARISON OF EXPENDITURES AND COMMITMENTS FOR THE YEARS 1944-1945

		1 9 4 4		1 9 4 5	
1.	OPERATION OF BRIDGES				
	A. Salaries, Coal, Materials, Machine Repair, Lighting and Power	$413,991.39		$439,196.66	
	B. Commitments	3,108.25	$ 417,099.64	5,797.19	$ 444,993.85
2.	HIGHWAY LIGHTING				
	A. Current, Maintenance & Installations (State)	$171,863.08		$195,447.21	
	B. Commitments	3,003.48		3,251.58	
	C. Municipal and County Aid	265,931.01		259,108.71	
	D. Commitments	82,381.66	523,179.23	106,922.62	564,730.12
3.	TRAFFIC SIGNALS AND ELECTRIC SIGNS				
	A. Current, Maintenance & New Installations	$ 82,309.85		$ 91,398.55	
	B. Commitments	43,987.41	126,297.26	31,167.36	122,565.91
	TOTAL EXPENDITURES AND COMMITMENTS		$1,066,576.13		$1,132,289.88
	BALANCE DECEMBER 31st		526,601.55		928,164.53
	TOTAL FUNDS AVAILABLE		$1,593,177.68		$2,060,454.41

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION
OPERATION OF DRAWBRIDGES JANUARY 1, 1945 TO DECEMBER 31, 1945

M.P.	LOCATION	SALARY	MILEAGE	MATERIAL & SUPPL.	LIGHT, HEAT & POWER	TELE-PHONE	CARS	CURRENT REPAIRS	OVERHEAD	TOTAL
2.5/3	Hackensack River	$14,399.05	$	$ 33.66	$ 980.17	$ 65.05	$ 5.17	$	$ 1,008.98	$ 16,492.08
0.4/4	Cape May Canal	5,853.09		8.19	233.73	76.40			407.66	6,579.07
51.3/4	Nacote Creek	5,895.58		7.62	49.95	49.70			393.47	6,396.32
53.0/4	Mullica River	5,898.74		88.86	358.40	58.15		15.00	419.71	6,838.86
56.7/4	Bass River	5,413.18		6.40	108.59	40.15			364.75	5,933.07
75.8/4N	Shark River	14,717.83	61.00	21.05	683.18	100.00	15.00		1,023.14	16,621.20
112.4/37	Island Heights	7,357.56	221.10	42.39	371.30	80.05			526.28	8,598.68
115.4/92	Long Beach	6,250.33	134.45	40.77	302.16	64.80			447.32	7,239.83
135.1/4	Victory	21,239.70		44.33	674.14	69.78	5.79		1,447.33	23,481.07
50.0/52	Beach Thorofare	6,097.44	127.05	14.92	1,112.57	70.00	2.00		488.25	7,912.23
50.1/52	Ship Channel	5,738.36		12.14	705.30	73.30	2.00		431.06	6,962.16
4.0/6E	Little Ferry	12,352.57		26.89	862.81	103.45	15.00		887.74	14,248.46
50.5/10	Hackensack River	28,465.53		47.37	1,991.98	92.70	24.91		2,019.10	32,641.59
250.0/25	Hudson & Manhattan	12,951.49		31.18		62.35	13.69		843.70	13,902.41
0.6/25	Cooper River	11,870.58	10.50	33.05	1,005.32	99.06	1.00		864.03	13,883.54
12.7/25	Rancocas Creek	5,366.96	173.25	21.91	223.27	79.75	2.00		387.66	6,254.80
56.7/25	Passaic River	27,443.86		66.01	5,050.74	74.75	87.22		2,160.20	34,882.78
57.8/25	Hackensack River	23,346.58		57.29	1,398.51	70.35	52.65		1,650.73	26,576.11
0.0/13	Lovelandtown	4,937.76	35.10	12.68	437.63	58.15		6.00	359.98	5,847.30
3.2/34	Manasquan River	5,289.49	58.85	15.23	410.51	68.20	2.00	6.00	386.28	6,236.56
8.6/35	Inland Waterway	11,503.07	44.20	8.06	208.76	66.57	8.75		775.17	12,614.58
11.4/35	Manasquan River	14,594.60	61.55	24.36	277.89	55.35	6.50	6.00	983.70	16,009.95
18.1/35	Shark River	6,570.78	11.95	16.23	801.33	96.82		6.00	482.39	7,985.50
43.9/35	Cheesequake Creek	11,179.36	57.00	33.64	510.37	92.65	9.00		782.07	12,664.09
12.6/36	Shrewsbury River	11,745.45	82.20	147.16	1,219.85	57.45	4.50		873.29	14,129.90
5.4/44	Oldman's Creek	5,541.54		15.16	601.66	57.53			409.25	6,625.14
8.5/44	Raccoon Creek	5,548.29	40.80	5.84	451.96	64.75	4.00		405.06	6,520.70
16.3/44	Mantua Creek	5,618.21	19.40	46.93	659.31	52.00	1.00	20.00	422.63	6,839.48
19.9/44	Woodbury Creek	6,760.29	87.60	3.75	293.87	76.87			468.59	7,690.97
2.8/49	Alloway Creek	5,547.11	316.10	30.58	137.64				396.84	6,428.27
15.3/49	Cohansey River	5,790.31	256.00	6.17	206.70	75.40	2.00		418.66	6,755.24
26.1/49	Maurice River	5,508.80		24.69	525.41	72.00	2.00		406.18	6,539.08
30.3/49	Menantico Creek	1,752.34							118.41	1,870.75
7.2/50	Tuckahoe River	5,590.05	65.85	17.79	160.16	85.85			385.84	6,305.54
0.1/56	Brigantine	79.70		8.35			20.00		5.26	113.31
0.1/83	Rutherford	6,435.60		68.21	121.50	29.23	3.83		375.79	7,034.16
		$340,651.18	$1,863.95	$1,088.86	$23,136.67	$2,338.61	$290.01	$59.00	$24,226.50	$393,654.78

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION
COMPARISON OF OPERATING COST OF DRAWBRIDGES 1944-1945

MILE POST	NAME OF BRIDGE		1944 SALARY	1944 OPER. EXP.	1944 TOTAL	1945 SALARY	1945 OPER. EXP.	1945 TOTAL
2.5/3	Hackensack River	Secaucus	$ 11,575.13	$ 2,312.27	$ 13,887.40	$ 14,399.05	$ 2,093.03	$ 16,492.08
0.4/4	Cape May Canal	Cape May	5,343.18	837.22	6,180.40	5,853.09	725.98	6,579.07
51.3/4	Nacote Creek	Smithville	4,464.00	577.34	5,041.34	5,895.58	500.74	6,396.32
53.0/4	Mullica River	Smithville	5,421.02	1,103.57	6,524.59	5,898.74	940.12	6,838.86
56.7/4	Bass River	New Gretna	5,066.26	754.66	5,820.92	5,413.18	519.89	5,933.07
135.1/4	Raritan River	Perth Amboy	17,522.43	2,753.24	20,275.67	21,239.70	2,241.37	23,481.07
75.8/4N	Shark River	Belmar	11,627.46	1,899.94	13,527.40	14,717.83	1,903.37	16,621.20
4.0/6E	Hackensack River	Little Ferry	14,462.84	2,968.87	17,431.71	12,352.57	1,895.89	14,248.46
50.5/10	Hackensack River	Jersey City	24,753.56	4,867.17	29,620.73	28,465.53	4,176.06	32,641.59
0.0/13	Lovelandtown Canal	Bay Head	4,855.11	1,147.54	6,002.65	4,937.76	909.54	5,847.30
0.6/25	Cooper River	Camden	11,977.82	2,797.85	14,775.67	11,870.58	2,012.96	13,883.54
12.7/25	Rancocas Creek	Bridgeboro	5,666.31	934.66	6,600.97	5,366.96	887.84	6,254.80
56.7/25M	Passaic River	Newark	23,067.74	8,528.46	31,596.20	27,443.86	7,438.92	34,882.78
57.8/25M	Hackensack River	Kearny	23,413.07	4,234.51	27,647.58	23,346.58	3,229.53	26,576.11
250.0/25	Hudson & Manhattan	Newark	10,016.80	1,168.55	11,185.35	12,951.49	950.92	13,902.41
3.2/34	Manasquan River	Manasquan	6,124.37	1,330.22	7,454.59	5,289.49	947.07	6,236.56
8.6/35	Inland Waterway	Pt. Pleasant	10,280.01	1,349.90	11,629.91	11,503.07	1,111.51	12,614.58
11.4/35	Manasquan River	Brielle	11,391.94	1,507.49	12,899.43	14,594.60	1,415.35	16,009.95
18.1/35	Shark River	Belmar	4,624.75	1,484.94	6,109.69	6,570.78	1,414.72	7,985.50
41.2/35	Matawan Creek	Keyport	1,251.33	190.63	1,441.96			
43.9/35	Cheesequake Creek	Morgan	9,888.02	1,796.52	11,684.54	11,179.36	1,484.73	12,664.09
12.6/36	Shrewsbury River	Highlands	11,893.16	2,619.86	14,513.02	11,745.45	2,384.45	14,129.90
112.4/37	Barnegat Bay	Island Hgts.	5,768.37	1,094.82	6,863.19	7,357.56	1,241.12	8,598.68
5.4/44	Oldmans Creek	Nortonville	4,949.43	1,386.92	6,336.35	5,541.54	1,083.60	6,625.14
8.5/44	Raccoon Creek	Bridgeport	5,553.29	1,228.22	6,781.51	5,548.29	972.41	6,520.70
16.3/44	Mantua Creek	Paulsboro	4,563.30	1,277.70	5,841.00	5,618.21	1,221.27	6,839.48
19.9/44	Woodbury Creek	Woodbury	4,645.79	1,142.41	5,788.20	6,760.29	930.68	7,690.97
2.8/49	Alloways Creek	Quinton	4,783.29	731.13	5,514.42	5,547.11	881.16	6,428.27
15.3/49	Cohansey River	Bridgeton	5,282.03	965.29	6,247.32	5,790.31	964.93	6,755.24
26.1/49	Maurice River	Millville	5,255.86	1,230.48	6,486.34	5,508.80	1,030.28	6,539.08
30.3/49	Menantico Creek	Millville	3,862.85	440.83	4,303.68	1,752.34	118.41	1,870.75
7.2/50	Tuckahoe River	Tuckahoe	4,725.14	720.05	5,445.19	5,590.05	715.49	6,305.54
50.0/52 & 50.1/52		Ocean City-Somers Point	10,750.96	3,330.77	14,081.73	11,835.80	3,038.59	14,874.39
115.4/92	Manahawkin Bay	Long Beach	5,210.90	1,006.28	6,217.18	6,250.33	989.50	7,239.83
0.1/56	Brigantine	Atlantic City				79.70	33.61	113.31
0.1/83	Rutherford Ave.	Rutherford				6,435.60	598.56	7,034.16
	Undistributed		42.92	16.16	59.08			
			$300,080.44	$61,736.47	$361,816.91	$340,651.18	$53,003.60	$393,654.78

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION
100% STATE HIGHWAY LIGHTING - EXPENDITURES FOR CURRENT

1945	PUBLIC SERVICE ELEC. & GAS CO.	JERSEY CENTRAL POWER & LIGHT CO.	ATLANTIC CITY ELECTRIC CO.	N.J. POWER & LIGHT CO.	VINELAND ELECTRIC CO.	ROCKLAND ELECTRIC CO.
January	$ 9,458.22	$ 2,953.34	$ 917.58	$ 766.12	$ 16.67	$ 80.89
February	9,462.00	2,946.95	927.78	766.12	16.67	80.89
March	9,456.30	2,946.95	926.55	766.12	16.67	80.89
April	9,467.89	2,946.95	925.78	766.12	16.67	80.89
May	9,446.94	2,946.95	1,198.16	766.12	16.67	80.89
June	9,464.38	2,943.11	1,165.54	766.12	16.67	80.89
July	9,472.22	2,930.46	* 5,566.65	766.12	16.67	80.89
August	9,893.08	2,921.65	* 4,834.58	766.12	16.67	80.89
September	10,021.75	2,921.65	* 4,099.31	766.12	16.67	80.89
October	10,046.11	3,035.22	1,164.21	807.42	16.67	80.89
November	10,081.66	3,077.89	878.83	810.10	16.67	80.89
December	10,081.66	3,122.29	878.83	800.75	16.67	80.89
	$116,352.21	$35,693.41	$23,483.80	$9,313.35	$200.04	$970.68

TOTALS ALL UTILITY COMPANIES $186,013.49

*734 Seasonal Highway Lighting Units

NEW JERSEY STATE HIGHWAY DEPARTMENT

ELECTRICAL DIVISION

HIGHWAY LIGHTING REIMBURSEMENT

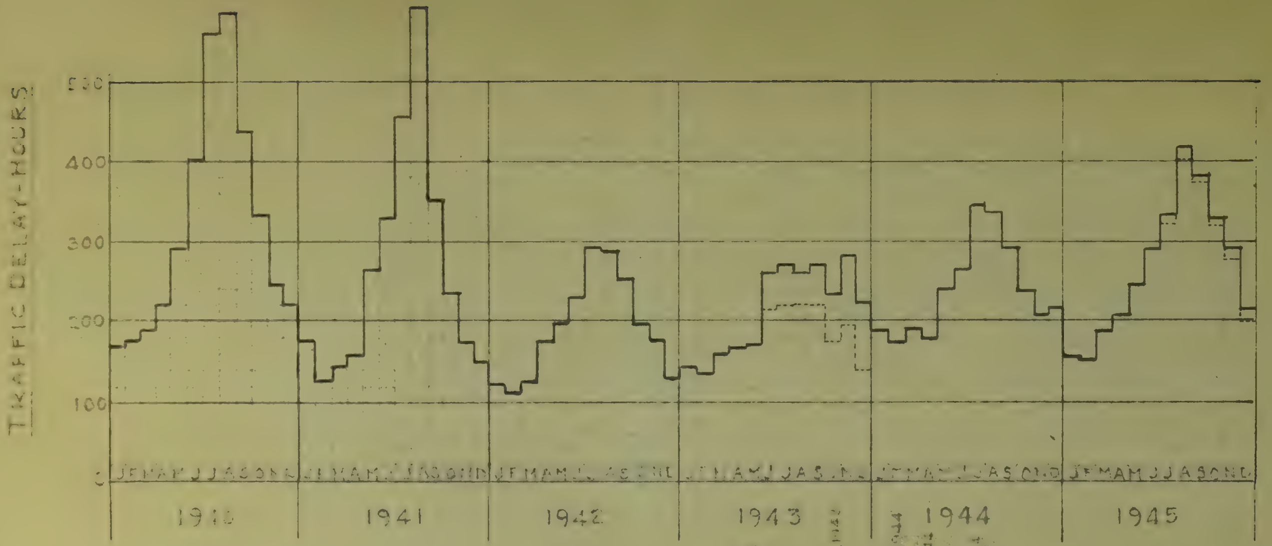
1945

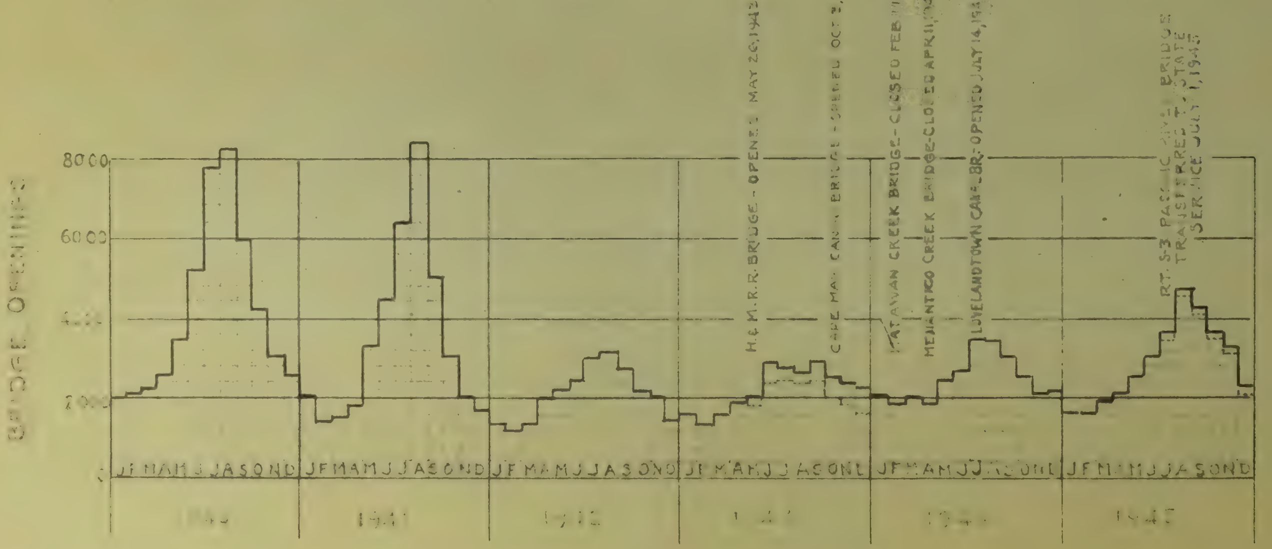
	COUNTY			MUNICIPAL			
COUNTY	COUNTY'S SHARE	STATE'S SHARE	TOTAL COST	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST	TOTAL STATE COST
Atlantic	$ 1,802.40	$ 1,802.40	$ 3,406.80	$ 2,323.58	$ 7,940.78	$ 10,264.36	$ 9,743.18
Bergen	1,957.57	1,957.58	3,915.15	7,873.15	17,817.00	25,690.15	19,774.58
Burlington	2,278.22	2,278.23	4,556.45	933.60	2,214.00	3,147.60	4,492.23
Camden	3,166.52	3,166.53	6,333.05	12,630.00	31,133.00	43,763.00	34,299.53
Cape May	1,091.40	1,091.40	2,182.80	102.00	356.40	458.40	1,447.80
Cumberland	1,681.00	1,681.00	3,362.00	5,016.40	5,330.80	8,347.20	7,011.80
Essex	1,171.25	1,269.25	2,440.50	8,878.95	18,465.20	27,344.15	19,734.45
Gloucester	3,064.30	3,064.30	6,128.60	3,312.05	8,329.40	11,641.45	11,393.70
Hudson	218.40	218.40	436.80	2,750.40	6,191.00	8,941.40	6,409.40
Hunterdon	715.82	715.83	1,431.65	140.00	321.67	461.67	1,037.50
Mercer	1,685.90	1,685.90	3,371.80	3,880.00	9,361.02	13,241.02	11,046.92
Middlesex	2,401.07	2,401.08	4,802.15	5,066.05	11,314.20	16,380.25	13,715.28
Monmouth	3,712.80	3,712.80	7,425.60	13,138.00	25,155.60	38,293.60	28,868.40
Morris	----	----	----	11,475.80	16,332.36	27,808.16	16,332.36
Ocean	2,872.00	2,872.00	5,744.00	3,316.20	7,620.00	10,936.20	10,492.00
Passaic	686.40	686.40	1,372.80	1,940.50	3,895.00	5,835.50	4,581.40
Salem	2,204.10	2,204.10	4,408.20	2,259.00	5,186.40	7,445.40	7,390.50
Somerset	931.50	931.50	1,863.00	3,394.40	7,716.16	11,110.56	8,647.66
Sussex	749.29	749.29	1,498.58	120.00	320.00	440.00	1,069.29
Union	2,544.45	2,544.45	5,088.90	17,871.55	47,433.20	65,304.75	49,977.65
Warren	998.60	998.60	1,997.20	5,858.33	3,189.63	9,048.46	4,188.23
TOTAL	$35,932.99	$36,031.04	$71,964.03	$110,280.46	$235,622.82	$345,913.28	$271,653.86

BRIDGE OPENINGS - TRAFFIC DELAY
ALL BRIDGES

OPERATION 1945

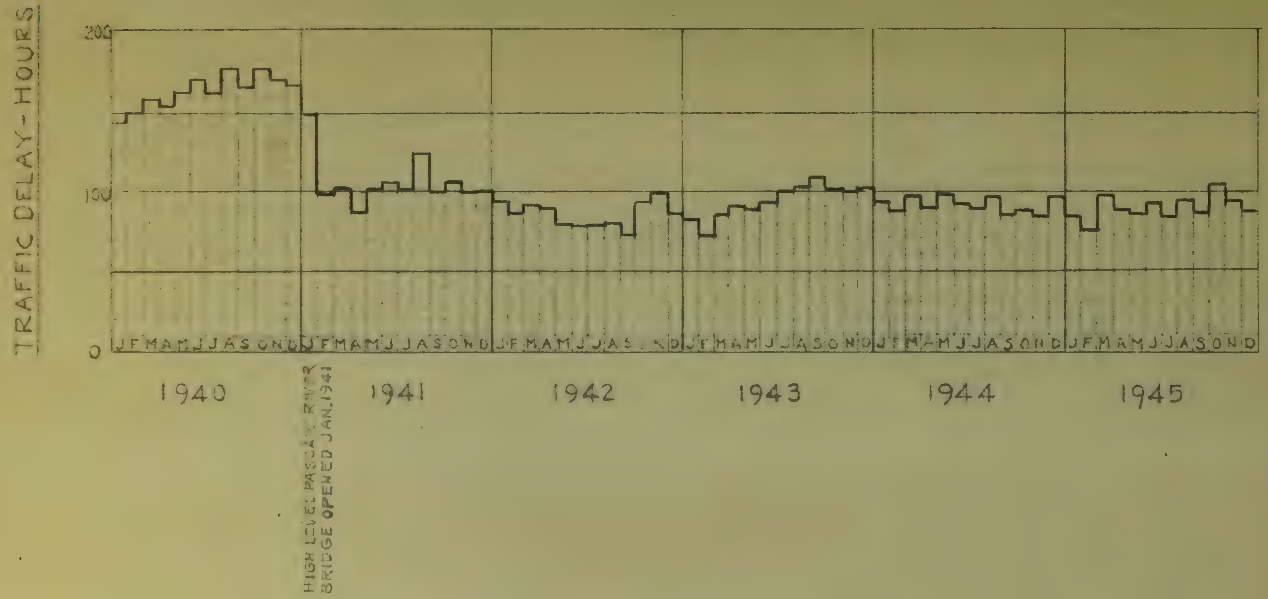
NUMBER BRIDGES	TOTAL OPENINGS	HOURS DELAY
34	34,890	3,217.[illegible]

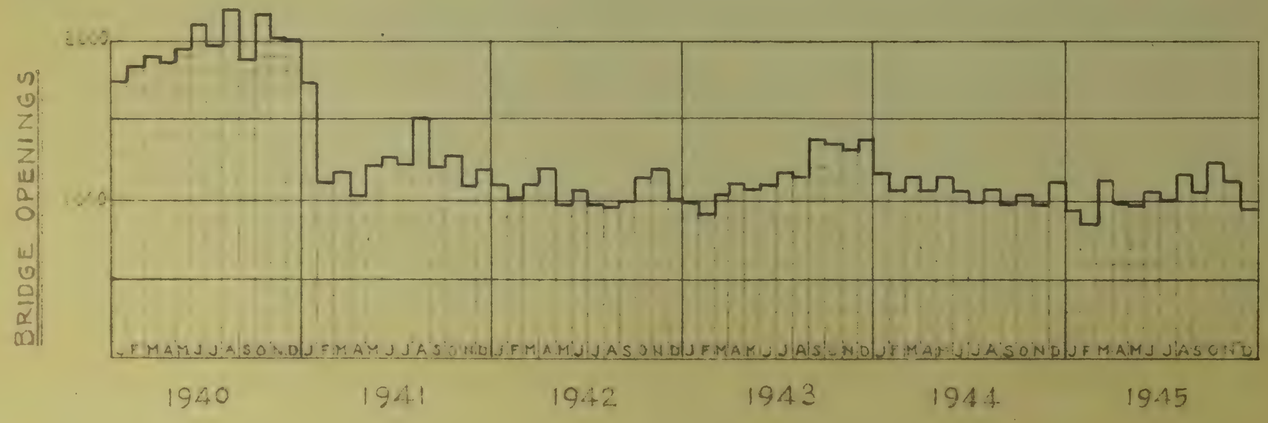




BRIDGE OPENINGS - TRAFFIC DELAY

CLASS I BRIDGES





OPERATION 1945

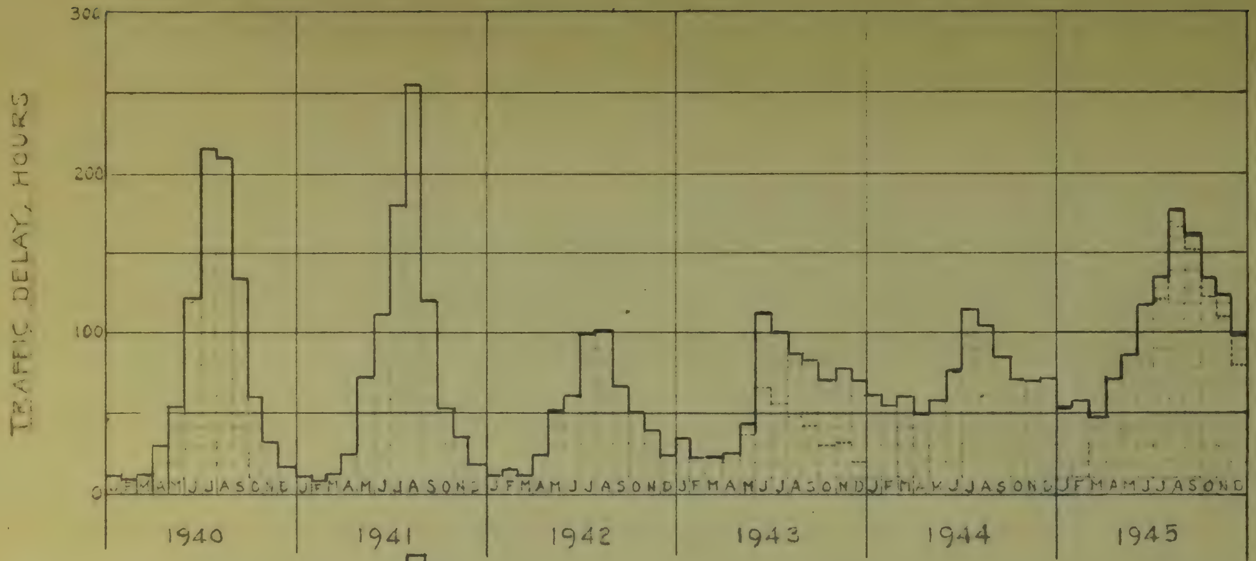
ROUTE	BRIDGE	OPENINGS	DELAY
4	RARITAN RIVER	2,386	231.2
10	HACKENSACK RIVER	1,403	137.0
25	COOPER RIVER	467	[illegible]
25M	PASSAIC RIVER	[illegible]	[illegible]
25M	HACKENSACK RIVER	7,142	557.7
	TOTAL	12,517	[illegible]

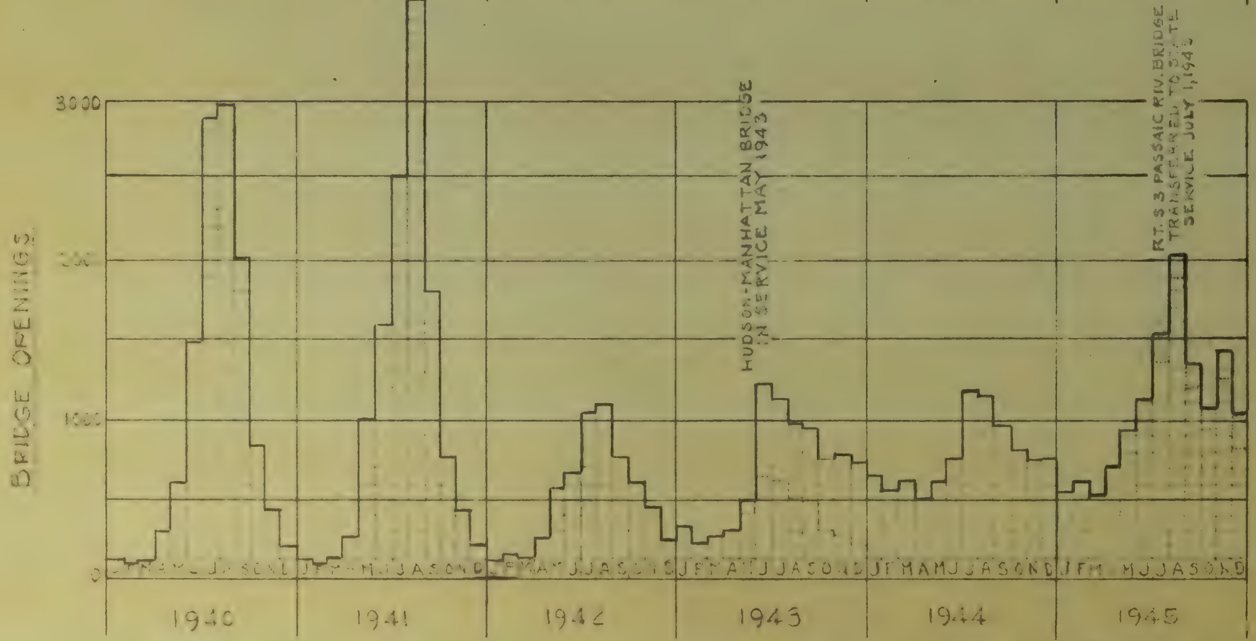
BRIDGE OPENINGS—TRAFFIC DELAY

CLASS II BRIDGES

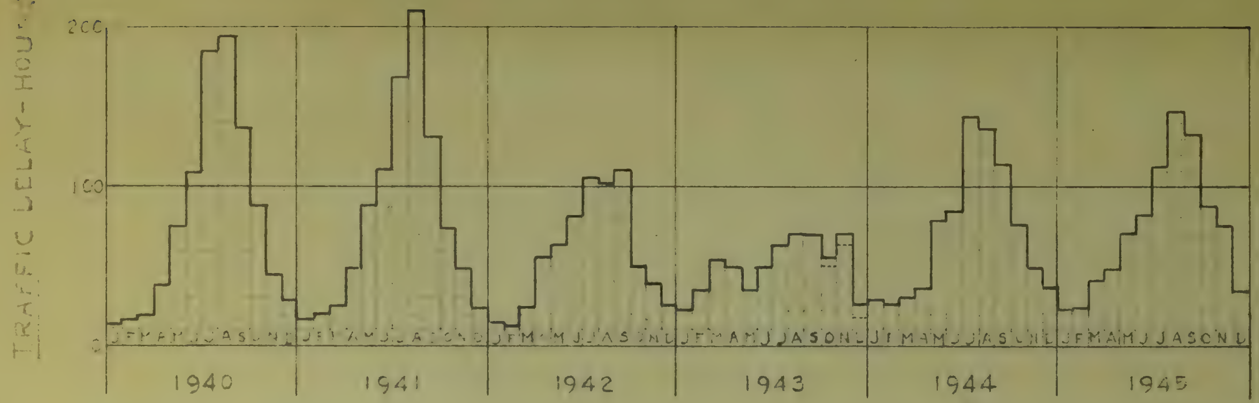
OPERATION 1945

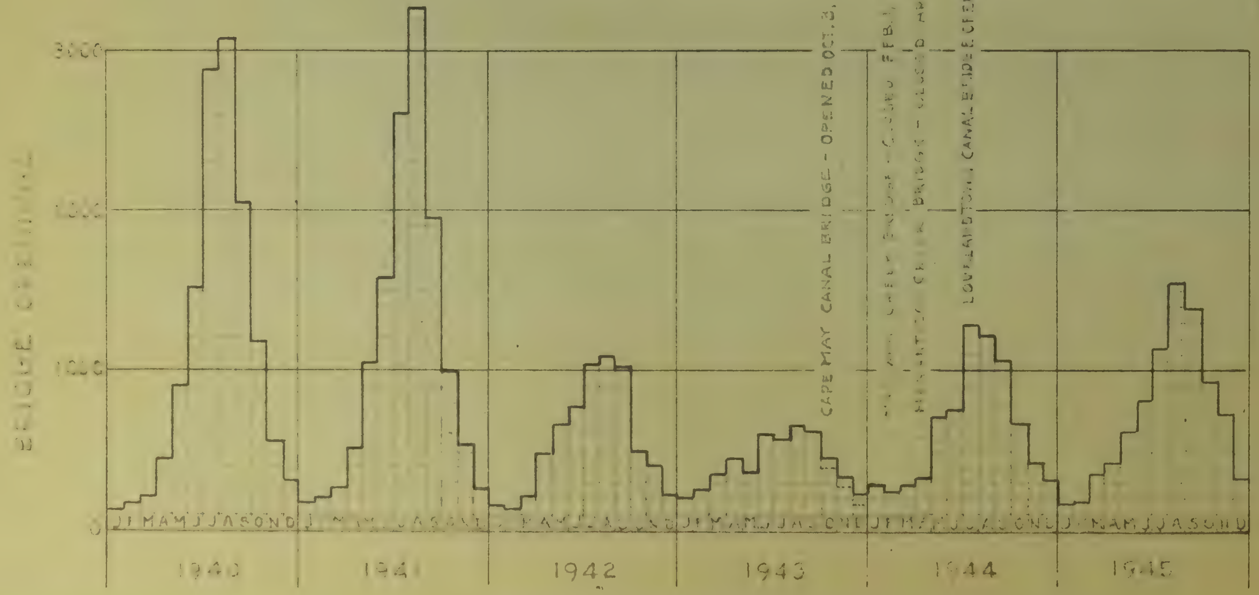
ROUTE	BRIDGE	OPENINGS	DELAY
3	HACKENSACK RIVER	271	43.6
4N	SHARK RIVER	1145	96.5
6E	HACKENSACK RIVER	216	23.1
25A	PASSAIC RIV. H&M	5803	542.2
35	MANASQUAN RIVER	2753	185.9
35	SHARK RIVER	1163	114.1
36	SHREWSBURY RIVER	224	27.1
52	BEACH THOROFARE	1138	146.9
S3	PASSAIC RIVER	1029	82.9
	TOTAL	13,742	1,270.3





BRIDGE OPENINGS - TRAFFIC DELAY
CLASS III BRIDGES





OPERATION 1945

ROUTE	BRIDGE	OPENINGS	DELAY
4	CAPE MAY CANAL	1451	[illegible]
4	NACOTE CREEK	39	[illegible]
4	MULLICA RIVER	343	35.6
4	BASS RIVER	15	4.4
13 E	LOVELANDTOWN CANAL	1417	96.7
25	RANCOCAS CREEK	123	112
34	MANASQUAN RIVER	134	[illegible]
35	INLAND WATERWAY	1436	126.7
35	CHEESEQUAKE CREEK	94	[illegible]
37	BARNEGAT BAY	1803	[illegible]
S-40	MANAHAWKIN BAY	355	75.5
44	OLDMAN'S CREEK	111	[illegible]
44	RACCOON CREEK	237	[illegible]
44	MANTUA CREEK	142	[illegible]
44	WOODBURY CREEK	[illegible]	[illegible]
45	ALLOWAYS CREEK	18	[illegible]
49	COHANSEY RIVER	27	[illegible]
49	MAURICE RIVER	43	[illegible]
50	TUCKAHOE RIVER	79	10.5
52	SHIP CHANNEL THOROFARE	[illegible]	6.1
	TOTAL	9,631	873.3

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION - BRIDGE BUREAU

1945 BRIDGE OPENINGS

MILE POST	BRIDGE & LOCATION	REPAIR & TEST	BOAT	TOTAL	TIME MINUTES
135.1/4	Raritan River, Perth Amboy	3	2385	2388	13875
50.5/10	Hackensack River, Jersey City	66	1337	1403	8224
0.6/25	Cooper River, Camden	35	432	467	2082
56.7/25M	Passaic River, Newark	46	1071	1117	6973
57.8/25M	Hackensack River, Kearny	96	7046	7142	33462
	Class I Totals	246	12271	12517	64616
2.5/3	Hackensack River, Secaucus	61	210	271	2618
75.8/4N	Shark River, Belmar	69	1076	1145	5791
4.0/6E	Hackensack River, Little Ferry	33	183	216	1567
250.0/25	Passaic River, (H&MRR) Newark	17	5786	5803	32532
11.4/35	Manasquan River	113	2640	2753	11333
18.1/35	Shark River, Belmar	79	1084	1163	6846
12.6/36	Shrewsbury River, Highlands	86	138	224	1629
50.0/52	Beach Thorofare, Ocean City	22	1116	1138	8932
0.1/83	Passaic River, Rutherford (1)	13	1016	1029	4971
	Class II Totals	493	13242	13742	76219
0.0/4	Cape May Canal, Cape May	6	1444	1450	11966
51.3/4	Nacote Creek, Smithville	0	39	39	458
53.0/4	Mullica River, Smithville	12	331	343	2120
56.7/4	Bass River, New Gretna	44	1	45	264
0.0/13	Lovelandtown Canal, Bay Head	73	1334	1407	5801
12.7/25	Rancocas Creek, Bridgeboro	77	46	123	670
3.2/34	Manasquan River, Brielle	68	66	134	843
8.6/35	Inland Waterway, Point Pleasant	127	1329	1456	7421
41.2/35	Matawan Creek, Keyport (2)	-	-	-	-
43.9/35	Cheesequake Creek, Morgan	19	75	94	814
112.4/37	Barnegat Bay, Seaside Heights	54	1749	1803	11104
115.4/92	Manahawkin Bay, Long Beach	31	854	885	4535
5.4/44	Oldman's Creek, Nortonville	86	25	111	917
8.5/44	Raccoon Creek, Bridgeport	97	190	287	2184
16.3/44	Mantua Creek, Paulsboro	41	101	142	933
19.9/44	Woodbury Creek, Woodbury	34	35	69	399
2.8/49	Alloways Creek, Quinton	12	6	18	169
15.3/49	Cohansey River, Bridgeton	23	4	27	171
26.1/49	Maurice River, Millville	36	10	46	273
30.3/49	Menantico Creek, Millville (3)	-	-	-	-
7.2/50	Tuckahoe River, Tuckahoe	38	40	78	628
50.1/52	Ship Channel Thorofare, Somers Pt.	18	56	74	548
	Class III Totals	896	7735	8631	52218
	Grand Totals	1635	33255	34890	193053

(1) Transferred from County to State operation 7/1/45
(2) Closed to river traffic 2/1/44
(3) Closed to river traffic 5/28/44 (12 hr. notice bridge)

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION - BRIDGE BUREAU
1945 BRIDGE OPENINGS

- CLASS I BRIDGES -

BRIDGE	OPERATIONS	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Raritan River,	Test Openings	0	0	0	1	0	1	0	0	0	0	1	0	3
Perth Amboy	Boat Openings	202	175	244	231	209	216	176	204	194	247	179	108	2,385
135.1/4	Total	202	175	244	232	209	217	176	204	194	247	180	108	2,388
	* Minutes closed	1,212	1,023	1,398	1,359	1,244	1,260	1,008	1,175	1,122	1,408	1,027	639	13,875
Hackensack River,	Test Openings	10	0	7	2	14	2	3	1	4	1	4	18	66
Jersey City	Boat Openings	111	119	112	90	97	99	96	122	108	123	158	102	1,337
50.5/10	Total	121	119	119	92	111	101	99	123	112	124	162	120	1,403
	* Minutes closed	690	704	734	558	681	579	586	696	646	711	920	719	8,224
Cooper River,	Test Openings	9	0	4	6	0	6	0	1	0	8	0	1	35
Camden	Boat Openings	4	16	22	28	28	49	46	52	35	70	46	36	432
0.6/25	Total	13	16	26	34	28	55	46	53	35	78	46	37	467
	* Minutes closed	65	71	98	168	123	254	187	226	181	332	202	175	2,082
Passaic River,	Test Openings	0	7	23	11	1	3	0	0	0	0	0	1	46
Newark	Boat Openings	81	61	81	61	63	95	99	110	78	143	94	105	1,071
56.7/25M	Total	81	68	104	72	64	98	99	110	78	143	94	106	1,117
	* Minutes closed	502	439	696	462	389	605	615	673	472	889	576	655	6,973
Hackensack River,	Test Openings	5	1	14	6	0	3	6	43	3	11	1	3	96
Kearny	Boat Openings	514	483	602	560	581	594	576	633	640	637	635	591	7,046
57.8/25M	Total	519	484	616	566	581	597	582	676	643	648	636	594	7,142
	* Minutes closed	2,582	2,349	2,959	2,776	2,837	2,876	2,672	2,865	2,786	2,907	2,950	2,903	33,462
CLASS I TOTALS	Test Openings	24	8	48	26	15	15	9	45	7	20	6	23	246
	Boat Openings	912	854	1,061	970	978	1,053	993	1,121	1,055	1,220	1,112	942	12,271
	Total	936	862	1,109	996	993	1,068	1,002	1,166	1,062	1,240	1,118	965	12,517
	* Minutes closed	5,051	4,586	5,885	5,323	5,274	5,574	5,068	5,635	5,207	6,247	5,675	5,091	64,616

* Minutes closed to highway traffic.

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION - BRIDGE BUREAU
1945 BRIDGE OPENINGS

- CLASS II BRIDGES -

BRIDGE	OPERATIONS	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTALS
Hackensack River,	Test Openings	9	0	1	1	4	1	0	2	3	33	5	2	61
Secaucus	Boat Openings	11	20	13	19	18	21	18	22	29	16	6	17	210
2.5/3	Total	20	20	14	20	22	22	18	24	32	49	11	19	271
	* Minutes closed	161	200	135	200	217	220	180	238	320	475	103	169	2,618
Shark River,	Test Openings	4	2	3	4	3	8	9	8	9	7	9	3	69
Belmar	Boat Openings	0	3	5	26	106	135	145	194	161	126	142	33	1,076
75.8/4N	Total	4	5	8	30	109	143	154	202	170	133	151	36	1,145
	* Minutes closed	22	26	40	158	561	761	824	1,020	848	641	714	176	5,791
Hackensack River,	Test Openings	4	2	5	1	4	2	1	1	4	1	7	1	33
Little Ferry	Boat Openings	11	20	10	15	16	15	14	22	25	16	6	13	183
4.0/6E	Total	15	22	15	16	20	17	15	23	29	17	13	14	216
	* Minutes closed	111	169	105	111	130	114	103	166	222	127	100	109	1,567
Passaic River	Test Opening	0	4	0	4	0	7	0	1	1	0	0	0	17
(H & M R.R.),	Boat Openings	471	519	398	516	456	388	405	484	510	531	534	574	5,786
Newark	Total	471	523	398	520	456	395	405	485	511	531	534	574	5,803
250.0/25	* Minutes closed	2,642	2,873	2,193	3,026	2,495	2,277	2,229	2,711	2,858	3,015	2,994	3,219	32,532
Manasquan River,	Test Openings	9	4	12	3	7	14	4	11	12	15	10	12	113
Brielle	Boat Openings	11	16	36	34	118	235	413	668	556	282	228	43	2,640
11.4/35	Total	20	20	48	37	125	249	417	679	568	297	238	55	2,753
	* Minutes closed	90	75	182	124	430	913	1,682	2,937	2,414	1,247	983	256	11,333
Shark River,	Test Openings	8	0	3	7	3	30	5	3	5	2	9	4	79
Belmar	Boat Openings	0	3	6	26	105	131	146	195	165	132	141	34	1,084
18.1/35	Total	8	3	9	33	108	161	151	198	170	134	150	38	1,163
	* Minutes closed	37	12	47	156	594	1,859	813	1,009	813	616	717	173	6,846

* Minutes closed to highway traffic.

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION - BRIDGE BUREAU
1945 BRIDGE OPENINGS

- CLASS II BRIDGES -

BRIDGE	OPERATIONS	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTALS
Shrewsbury River	Test Openings	5	6	5	14	7	5	3	12	10	11	5	3	86
Highlands	Boat Openings	2	2	0	1	1	0	32	30	34	30	3	3	138
12.6/36	Total	7	8	5	15	8	5	35	42	44	41	8	6	224
	* Minutes closed	60	63	31	117	59	27	261	292	327	292	53	47	1,629
Beach Thorofare,	Test Openings	0	0	2	2	0	2	10	1	2	1	1	1	22
Ocean City	Boat Openings	9	6	17	40	88	121	154	213	154	121	125	68	1,116
50.0/52	Total	9	6	19	42	88	123	164	214	156	122	126	69	1,138
	* Minutes closed	64	48	157	320	679	994	1,254	1,640	1,238	1,024	954	560	8,932
Rt S-3 Rutherford	Test Openings							1	0	0	8	3	1	13
Avenue, Rutherford	Boat Openings							164	156	145	154	178	219	1,016
0.1/83	Total	-	-	-	-	-	-	165	156	145	162	181	220	1,029
	* Minutes closed							893	680	666	726	874	1,132	4,971
CLASS II TOTALS	Test Openings	39	18	31	36	28	69	33	39	46	78	49	27	493
	Boat Openings	515	589	485	677	908	1,046	1,491	1,984	1,779	1,408	1,363	1,004	13,249
	Total	554	607	516	713	936	1,115	1,524	2,023	1,825	1,486	1,412	1,031	13,742
	* Minutes closed	3,187	3,466	2,890	4,212	5,165	7,165	8,239	10,693	9,706	8,163	7,492	5,841	76,219

* Minutes closed to highway traffic.

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION - BRIDGE BUREAU
1945 BRIDGE OPENINGS

- CLASS III BRIDGES -

BRIDGE	OPERATIONS	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTALS
Cape May Canal,	Test Openings	0	1	0	0	0	0	2	0	1	0	2	0	6
Cape May	Boat Openings	76	63	114	165	238	123	108	110	115	110	154	68	1,444
0.0/4	Total	76	64	114	165	238	123	110	110	116	110	156	68	1,450
	* Minutes closed	616	536	937	1,358	1,944	1,006	894	893	936	912	1,377	557	11,966
Nacote Creek,	Test Openings	0	0	0	0	0	0	0	0	0	0	0	0	0
Smithville	Boat Openings	2	2	2	2	4	4	5	5	3	4	3	3	39
51.3/4	Total	2	2	2	2	4	4	5	5	3	4	3	3	39
	* Minutes closed	24	24	24	24	46	46	58	58	36	46	36	36	458
Mullica River,	Test Openings	1	2	2	2	0	0	1	2	0	2	0	0	12
Smithville	Boat Openings	11	14	28	27	33	46	38	36	26	25	24	23	331
53.0/4	Total	12	16	30	29	33	46	39	38	26	27	24	23	343
	* Minutes closed	74	98	184	180	202	288	240	239	161	166	147	141	2,120
Bass River,	Test Openings	4	4	3	4	4	4	2	4	3	4	4	4	44
New Gretna	Boat Openings	0	0	0	0	0	0	1	0	0	0	0	0	1
56.7/4	Total	4	4	3	4	4	4	3	4	3	4	4	4	45
	* Minutes closed	23	23	17	26	24	23	20	22	17	22	23	24	264
Lovelandtown	Test Openings	4	3	8	9	5	5	2	8	4	6	9	10	73
Canal, Bay Head	Boat Openings	10	13	34	42	63	107	152	315	269	193	100	36	1,334
0.0/13	Total	14	16	42	51	68	112	154	323	273	199	109	46	1,407
	* Minutes closed	49	63	203	236	317	472	612	1,350	1,105	789	411	194	5,801
Rancocas Creek,	Test Openings	5	5	7	2	4	19	2	4	2	5	6	16	77
Bridgeboro	Boat Openings	0	0	2	6	6	10	13	3	6	0	0	0	46
12.7/25	Total	5	5	9	8	10	29	15	7	8	5	6	16	123
	* Minutes closed	28	29	49	48	51	166	80	39	44	25	31	80	670

* Minutes closed to highway traffic.

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION - BRIDGE BUREAU
1945 BRIDGE OPENINGS

- CLASS III BRIDGES -

BRIDGE	OPERATIONS	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTALS
Manasquan River,	Test Openings	2	2	17	4	5	4	8	4	5	6	6	5	68
Brielle	Boat Openings	0	0	0	0	0	4	11	24	14	7	4	2	66
3.2/34	Total	2	2	17	4	5	8	19	28	19	13	10	7	134
	* Minutes closed	12	12	96	22	30	43	132	185	125	87	59	40	843
Inland Waterway,	Test Openings	8	10	8	7	4	40	7	10	14	7	8	4	127
Point Pleasant	Boat Openings	10	12	19	23	49	107	163	322	291	191	104	38	1,329
8.6/35	Total	18	22	27	30	53	147	170	332	305	198	112	42	1,456
	* Minutes closed	89	118	130	154	259	794	867	1,705	1,523	1,006	572	204	7,421
Cheesequake Creek	Test Openings	0	2	1	3	0	2	0	0	1	9	0	1	19
Morgan	Boat Openings	2	8	5	3	11	4	8	7	11	4	7	5	75
43.9/35	Total	2	10	6	6	11	6	8	7	12	13	7	6	94
	* Minutes closed	20	97	58	53	93	52	65	73	105	86	52	60	814
Barnegat Bay,	Test Openings	4	5	7	7	1	1	5	3	5	5	6	5	54
Seaside Heights	Boat Openings	0	1	10	18	72	166	386	462	363	155	89	27	1,749
112.4/37	Total	4	6	17	25	73	167	391	465	368	160	95	32	1,803
	* Minutes closed	24	23	110	155	469	1,016	2,403	2,874	2,274	978	579	199	11,104
Manahawkin Bay,	Test Openings	2	5	2	3	0	0	2	6	5	1	2	3	31
Long Beach	Boat Openings	2	2	10	16	54	78	138	145	153	109	120	27	854
115.4/92	Total	4	7	12	19	54	78	140	151	158	110	122	30	885
	* Minutes closed	20	35	70	95	275	405	705	790	795	530	630	155	4,535
Oldman's Creek,	Test Openings	16	6	9	14	6	4	4	5	6	7	6	3	86
Nortonville	Boat Openings	0	0	2	0	1	4	18	0	0	0	0	0	25
5.4/44	Total	16	6	11	14	7	8	22	5	6	7	6	3	111
	* Minutes closed	149	50	90	117	53	64	179	37	48	56	48	26	917

* Minutes closed to highway traffic.

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION - BRIDGE BUREAU
1945 BRIDGE OPENINGS

- CLASS III BRIDGES -

BRIDGE	OPERATIONS	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTALS
Raccoon Creek,	Test Openings	3	12	7	9	1	1	1	1	22	13	21	6	97
Bridgeport	Boat Openings	0	4	25	26	29	24	14	15	10	17	15	11	190
8.5/44	Total	3	16	32	35	30	25	15	16	32	30	36	17	287
	* Minutes closed	20	117	243	266	214	177	110	117	233	274	301	112	2,184
Mantua Creek,	Test Openings	6	5	10	3	2	2	3	3	3	0	1	3	41
Paulsboro	Boat Openings	0	0	0	4	13	10	11	9	14	21	17	2	101
16.3/44	Total	6	5	10	7	15	12	14	12	17	21	18	5	142
	* Minutes closed	48	33	74	45	102	82	89	77	111	134	103	35	933
Woodbury Creek,	Test Openings	5	5	5	7	1	0	4	4	0	0	1	2	34
Woodbury	Boat Openings	0	0	0	0	2	8	5	1	11	7	1	0	35
19.9/44	Total	5	5	5	7	3	8	9	5	11	7	2	2	69
	* Minutes closed	25	25	25	35	20	42	56	47	67	33	12	12	399
Alloways Creek,	Test Openings	1	1	1	1	1	1	1	1	1	1	1	1	12
Quinton	Boat Openings	0	0	0	0	2	1	0	0	2	0	1	0	6
2.8/49	Total	1	1	1	1	3	2	1	1	3	1	2	1	18
	* Minutes closed	10	10	9	10	27	19	9	9	28	9	19	10	169
Cohansey River,	Test Openings	2	2	2	1	1	2	2	2	2	3	2	2	23
Bridgeton	Boat Openings	0	0	0	2	1	1	0	0	0	0	0	0	4
15.3/49	Total	2	2	2	3	2	3	2	2	2	3	2	2	27
	* Minutes closed	12	12	13	20	13	18	13	12	13	19	13	13	171
Maurice River,	Test Openings	3	2	3	3	2	13	2	3	2	0	1	2	36
Millville	Boat Openings	0	0	0	0	0	0	2	1	1	2	4	0	10
26.1/49	Total	3	2	3	3	2	13	4	4	3	2	5	2	46
	* Minutes closed	20	8	18	9	13	65	30	25	20	20	35	10	273

* Minutes closed to highway traffic.

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION - BRIDGE BUREAU
1945 BRIDGE OPENINGS

- CLASS III BRIDGES -

BRIDGE	OPERATIONS	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTALS
Tuckahoe River, Tuckahoe 7.2/50	Test Openings	4	3	1	2	3	6	1	2	3	2	4	7	38
	Boat Openings	1	2	3	4	2	6	4	8	8	2	0	0	40
	Total	5	5	4	6	5	12	5	10	11	4	4	7	78
	* Minutes closed	35	38	31	47	35	108	39	83	100	28	28	56	628
Ship Channel Thorofare, Somers Point 50.1/52	Test Openings	1	1	3	1	5	2	1	2	0	2	0	0	18
	Boat Openings	0	0	0	0	0	2	11	20	19	3	1	0	56
	Total	1	1	3	1	5	4	12	22	19	5	1	0	74
	* Minutes closed	7	7	28	7	42	26	88	160	145	32	6	0	548
CLASS III TOTALS	Test Openings	71	76	96	82	45	106	50	64	79	73	80	74	896
	Boat Openings	114	121	254	338	580	705	1,088	1,483	1,316	850	644	242	7,735
	Total	185	197	350	420	625	811	1,138	1,547	1,395	923	724	316	8,631
	* Minutes closed	1,305	1,358	2,409	2,907	4,229	4,912	6,689	8,795	7,886	5,282	4,482	1,964	52,218
GRAND TOTALS	Test Openings	134	102	175	144	88	190	92	148	132	171	135	124	1,635
	Boat Openings	1,541	1,564	1,800	1,985	2,466	2,804	3,572	4,588	4,150	3,478	3,119	2,188	33,255
	Total	1,675	1,666	1,975	2,129	2,554	2,994	3,664	4,736	4,282	3,649	3,254	2,312	34,890
	* Minutes closed	9,543	9,410	11,184	12,442	14,668	17,651	19,996	25,123	22,799	19,692	17,649	12,896	193,053

* Minutes closed to highway traffic.

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION - BRIDGE BUREAU
COMPARISON OF BRIDGE OPENINGS 1941-1944-1945

CLASS I BRIDGES

MILE POST	BRIDGE AND LOCATION	OPERATION	1941	1944	1945	VARIATION 1944-1945	
						OVER	UNDER
135.1/4	Raritan River, (Victory Bridge) Perth Amboy	Test Openings	26	1	3	2	
		Boat Openings	2299	3087	2385		702
		Total:	2325	3088	2388		700
		Minutes closed to traffic	18 12841	18299	13875		4424
50.5/10	Hackensack River (Wittpenn Bridge) Jersey City	Test Openings	118	58	66	8	
		Boat Openings	1131	1121	1337	216	
		Total:	1249	1179	1403	224	
		Minutes closed to traffic	7166	6804	8224	1420	
0.6/25	Cooper River, Camden	Test Openings	44	89	35		54
		Boat Openings	914	304	432	128	
		Total:	958	393	467	74	
		Minutes closed to traffic	4038	1653	2082	429	
56.7/25M	Passaic River, Newark	Test Openings	139	33	46	13	
		Boat Openings	2938	954	1071	117	
		Total:	3077	987	1117	130	
		Minutes closed to traffic	18499	6151	6973	822	
57.8/25M	Hackensack River, Kearny	Test Openings	16	131	96		35
		Boat Openings	7230	6775	7046	271	
		Total:	7246	6906	7142	236	
		Minutes closed to traffic	32729	32257	33462	1205	
Class I Totals		Test Openings	343	312	246		66
		Boat Openings	14512	12241	12271	30	
		Total:	14855	12553	12517		36
		Minutes closed to traffic	75273	65164	64616		548

CLASS II BRIDGES

MILE POST	BRIDGE AND LOCATION	OPERATION	1941	1944	1945	OVER	UNDER
2.5/3	Hackensack River, Secaucus	Test Openings	56	249	61		188
		Boat Openings	309	227	210		17
		Total:	365	476	271		205
		Minutes closed to traffic	2423	3963	2618		1345

MILE POST	BRIDGE AND LOCATION	OPERATION	1941	1944	1945	VARIATION 1944-1945 OVER	VARIATION 1944-1945 UNDER
75.8/4N	Shark River	Test Openings	19	58	69	11	[illegible]
	(Sterner Bridge)	Boat Openings	1870	516	1076	560	[illegible]
	Belmar	Total:	1889	574	1145	571	
		Minutes closed to traffic	7883	3001	5791	2790	[illegible]
4.0/6E	Hackensack River,	Test Openings	32	41	33		8
	Little Ferry	Boat Openings	190	163	183	20	
		Total:	222	204	216	12	
		Minutes closed to traffic	1262	1476	1567	91	
250.0/25	Passaic River,	Test Openings	Opened	14	17	3	
	(H & M RR)	Boat Openings	to high-	5492	5786	294	
	Newark	Total:	way	5506	5803	297	
		Minutes closed	traffic				
		to traffic	5/26/43	30721	32532	1811	
11.4/35	Manasquan River,	Test Openings	105	77	113	36	
	Brielle	Boat Openings	4081	1281	2640	1359	
		Total:	4186	1358	2753	1395	
		Minutes closed to traffic	13610	4929	11333	6404	
18.1/35	Shark River,	Test Openings	28	50	79	29	
	Belmar	Boat Openings	1868	494	1084	590	
		Total:	1896	544	1163	619	
		Minutes closed to traffic	6944	2707	6846	4139	
12.6/36	Shrewsbury River,	Test Openings	89	85	86	1	
	Highlands	Boat Openings	262	35	138	103	
		Total:	351	120	224	104	
		Minutes closed to traffic	2674	821	1629	808	
50.0/52	Beach Thorofare,	Test Openings	26	17	22	5	
	Ocean City	Boat Openings	2875	920	1116	196	
		Total:	2901	937	1138	201	
		Minutes closed to traffic	15798	7445	8932	1487	
0.1/83	Passaic River,	Test Openings	Taken over from		13	13	
	Rutherford	Boat Openings	Bergen County		1016	1016	
		Total:	7/1/45		1029	1029	
		Minutes closed to traffic			4971	4971	
CLASS II Totals		Test Openings	355	591	493		98
		Boat Openings	11455	9128	13249	4121	
		Total:	11810	9719	13742	4023	
		Minutes closed to traffic	50594	55063	76219	21156	

CLASS III BRIDGES

MILE POST	BRIDGE AND LOCATION	OPERATION	1941	1944	1945	VARIATION 1944-1945 OVER	UNDER
0.4/4	Cape May Canal,	Test Openings	Opened	7	6		1
	Cape May	Boat Openings	to High-	1890	1444		446
		Total:	way	1897	1450		447
		Minutes closed	traffic				
		to traffic	10/3/43	15711	11966		3745
51.3/4	Nacote Creek,	Test Openings	16	5	0		5
	Smithville	Boat Openings	7	39	39		
		Total:	23	44	39		5
		Minutes closed					
		to traffic	180	471	458		13
53.0/4	Mullica River,	Test Openings	5	22	12		10
	Smithville	Boat Openings	514	325	331	6	
		Total:	519	347	343		4
		Minutes closed					
		to traffic	3267	2148	2120		28
56.7/4	Bass River,	Test Openings	49	50	44		6
	New Gretna	Boat Openings	4	0	1	1	
		Total:	53	50	45		5
		Minutes closed					
		to traffic	236	266	264	2	
0.3/13	Lovelandtown Canal,	Test Openings	108	45	73	28	
	Bay Head	Boat Openings	2232	409	1334	925	
		Total:	2340	454	1407	953	
		Minutes closed					
		to traffic	7551	2763	5801	3038	
12.7/25	Pancocas Creek	Test Openings	35	58	77	19	
	Bridgeboro	Boat Openings	320	30	46	16	
		Total:	355	88	123	35	
		Minutes closed					
		to traffic	1965	492	670	178	
3.2/34	Manasquan River,	Test Openings	50	89	68		21
	Manasquan	Boat Openings	389	45	66	21	
		Total:	439	134	134		
		Minutes closed					
		to traffic	1629	805	843	38	
8.6/35	Inland Waterway,	Test Openings	139	79	127	48	
	Point Pleasant	Boat Openings	2333	734	1329	595	
		Total:	2472	813	1456	643	
		Minutes closed					
		to traffic	9487	4054	7421	3367	
43.9/35	Cheesequake Creek,	Test Openings	35	77	19		58
	Morgan	Boat Openings	819	52	75	23	
		Total:	854	129	94		35
		Minutes closed					
		to traffic	3616	993	814		179

						VARIATION 1944-1945	
MILE POST	BRIDGE AND LOCATION	OPERATION	1941	1944	1945	OVER	UNDER
112.4/37	Barnegat Bay, -	Test Openings	7	34	54	20	
	Seaside Heights	Boat Openings	3825	1858	1749		109
		Total:	3832	1892	1803		89
		Minutes closed to traffic	12659	12330	11104		1226
115.4/92	Manahawkin Bay,	Test Openings	3	33	31		2
	Long Beach	Boat Openings	1704	707	854	147	
		Total:	1707	740	885	145	
		Minutes closed to traffic	9305	3900	4535	635	
5.4/44	Oldmans Creek,	Test Openings	58	66	86	20	
	Nortonville	Boat Openings	9	61	25		36
		Total:	67	127	111		16
		Minutes closed to traffic	497	1004	917		87
8.5/44	Raccoon Creek	Test Openings	32	25	97	72	
	Bridgeport	Boat Openings	252	230	190		40
		Total:	284	255	287	32	
		Minutes closed to traffic	1674	1720	2184	464	
16.3/44	Mantua Creek,	Test Openings	74	58	41		17
	Paulsboro	Boat Openings	249	86	101	15	
		Total:	323	144	142		2
		Minutes closed to traffic	3206	890	933		43
19.9/44	Woodbury Creek,	Test Openings	104	39	34		5
	Woodbury	Boat Openings	261	103	35		68
		Total:	365	142	69		73
		Minutes closed to traffic	1510	718	399		319
2.8/49	Alloways Creek,	Test Openings	9	12	12		
	Quinton	Boat Openings	5	2	6	4	
		Total:	14	14	18	4	
		Minutes closed to traffic	143	134	169	35	
15.3/49	Cohansey River,	Test Openings	35	30	23		7
	Bridgeton	Boat Openings	20	11	4		7
		Total:	55	41	27		14
		Minutes closed to traffic	338½	262	171		91
26.1/49	Maurice River,	Test Openings	23	27	36	9	
	Millville	Boat Openings	101	5	10	5	
		Total:	124	32	46	14	
		Minutes closed to traffic	1121	177	273	96	

MILE POST	BRIDGE AND LOCATION	OPERATION	1941	1944	1945	VARIATION 1944-1945 OVER	UNDER
7.2/50	Tuckahoe River, Tuckahoe	Test Openings	17	26	38	12	
		Boat Openings	62	70	40		30
		Total:	79	96	78		18
		Minutes closed to traffic	574	729	628		101
50.1/52	Ship Channel Thorofare, Somers Point	Test Openings	23	29	18		11
		Boat Openings	261	75	56		19
		Total:	284	104	74		30
		Minutes closed to traffic	2018	774	548		226
Class III Totals		Test Openings	858	827	896	69	
		Boat Openings	13367	6732	7735	1003	
		Total:	14225	7559	8631	1072	
		Minutes closed to traffic	61281½	50603	52218	1605	
Grand Totals		Test Openings	1556	1730	1635		95
		Boat Openings	39334	28101	33255	5154	
		Total:	40890	29831	34890	5059	
		Minutes closed to traffic	187148½	170830	193053	22223	

NEW JERSEY STATE HIGHWAY DEPARTMENT

ELECTRICAL DIVISION

HIGHWAY SAFETY LIGHTING BUREAU

YEAR	LOCATIONS	250 C.P. UNITS	400 C.P. UNITS	600 C.P. UNITS	1000 C.P. UNITS	TOTAL UNITS
Dec. 31, 1938	141 Municipalities	82	1,708	3,451	115	5,356
	16 Counties at 396 Intersections	129	343	154	-	626
	210 Locations (100% State Lighting)	1,317	1,399	980	-	3,696
	Total	1,528	3,450	4,585	115	9,678
Dec. 31, 1939	177 Municipalities	81	2,129	3,596	120	5,926
	20 Counties 940 Intersections	277	736	575	1	1,589
	266 Locations (100% State Lighting)	1,314	1,803	1,088	-	4,205
	Total	1,672	4,668	5,259	121	11,720
Dec. 31, 1940	194 Municipalities	81	2,441	3,757	122	6,401
	20 Counties at 959 Intersections	280	754	529	-	1,563
	256 Locations (100% State Lighting)	1,351	2,164	1,011	-	4,526
	Total	1,712	5,359	5,297	122	12,490
Dec. 31, 1941	194 Municipalities	81	2,429	3,751	122	6,383
	20 Counties at 958 Intersections	283	748	529	-	1,560
	266 Locations (100% State Lighting)	1,344	2,518	1,054	11	4,927
	Total	1,708	5,695	5,334	133	12,870

YEAR	LOCATIONS	250 C.P. UNITS	400 C.P. UNITS	600 C.P. UNITS	1000 C.P. UNITS	TOTAL UNITS
Dec. 31, 1942	194 Municipalities	81	2,429	3,751	122	6,383
	20 Counties at 958 Intersections	283	748	529	-	1,560
	262 Locations (100% State Lighting)	1,140	2,062	975	11	4,188
	Total	1,504	5,239	5,255	133	12,131
Dec. 31, 1943	191 Municipalities	208	3,661	983	20	4,872
	20 Counties at 958 Intersections	329	988	168	-	1,485
	270 Locations (100% State Lighting)	456	2,318	814	11	3,599
	Total	993	6,367	1,965	31	9,956
Dec. 31, 1944	194 Municipalities	199	3,637	1,152	20	5,008
	20 Counties at 951 Intersections	403	919	170	-	1,492
	272 Locations (100% State Lighting)	497	2,414	835	11	3,757
	Total	1,099	6,970	2,157	31	10,257
Dec. 31, 1945	201 Municipalities	67	2,609	3,112	160	5,948
	20 Counties at 967 Intersections	397	747	368	-	1,512
	279 Locations (100% State Lighting)	480	3,519	848	11	4,858
	Total	944	6,875	4,328	171	12,318

100% STATE LIGHTING

	1943 PROGRAM				1944 PROGRAM				1945 PROGRAM													
	CANDLE POWER UNITS				CANDLE POWER UNITS				CANDLE POWER UNITS				NEW LAMPS			RESTORED TO SERVICE			INCREASED		REMOVED	
	100 or LESS	250	400	600	100 or LESS	250	400	600	100 or LESS	250	400	600	250	400	600	250	400	600	250 to 400	400 to 600	250	400
PS 154 Locations	45	288	1388	820A	45	331	1410	841A	45	343	1611	846A	13	182			22	2		3	1	
JCP&L 63 Locations	47	85	517		47	88	585		47	68	679						98		11		9	15
ACE 37 Locations	37	167	170			62	170			51	169 771*	1					771			1	11**	
NJP&L 23 Locations	2	16	221	5	2	16	227	5	2	18	267	12			7	6	36		4			
RE 1 Location			18				18				18											
VE 1 Location			4				4				4											
	94	456	2318	825	94	497	2414	846	94	480	3519	859	13	182	7	6	927	2	15	4	21	15
		(3693)				(3851)				(4952)												

279 Locations - 1945

A - Includes 11-1000 C.P. lamps

* - Seasonal lighting Rt. 43, 5/25/45 - 7/25/45 742-400 C.P.

* - Seasonal lighting Ocean City - Somers Point Bridge, 5/1/45 - 10/31/45 29-400 C.P.

** - 11-250 C.P. lamps transferred to Municipal Reimbursement Program

COUNTY INTERSECTIONS LIGHTING PROGRAM

Utility Co.	1943 Program Candle Power Units			1944 Program Candle Power Units			1945 Program Candle Power Units			1945 Lamps Increased			1945 Removed from Service	1945 Restore to Service			1945 New Lamps
	250	400	600	250	400	600	250	400	600	250 to 400	250 to 600	400 to 600	400 C.P.	250	400	600	600 C.P.
PS	35	388	157	38	390	159	36	288	269	2	2	104	-	2	-	2	2
JCP	25	231	2	27	231	2	24	181	60	4	-	54	-	1	-	4	-
ACE	176	237	9	245	166	9	244	147	34	1	2	22	16*	2	18	1	-
NJP	77	103	-	77	103	-	77	103	4	-	-	2	-	-	2	2	-
MISC.	16	29	-	16	29	-	16	28	1	-	-	1	-	-	-	-	-
TOTAL	329	988	168	403	919	170	397	747	368	7	4	183	16	5	20	9	2
	Total Units		1485	Total Units		1492	Total Units		1512								

*14 - 400 candle power units removed due to transfer of Salem County roads to municipalities.

PS - Public Service Electric and Gas Company
JCP - Jersey Central Power and Light Company
ACE - Atlantic City Electric Company
NJP - New Jersey Power & Light Company

958 Locations - 1943
951 Locations - 1944
967 Locations - 1945

HIGHWAY LIGHTING REIMBURSEMENT

MUNICIPAL

Util-ity Co.	1943 PROGRAM				1944 PROGRAM				1945 PROGRAM				1945 PROGRAM														
	Candle Power Units				Candle Power Units				Candle Power Units				Lamps Increased					Removed from Service			Restored to Service				New Lamps		
	250	400	600	1000	250	400	600	1000	250	400	600	1000	250 to 400	250 to 600	400 to 600	400 to 1000	600 to 1000	400	600	1000	250	400	600	1000	400	600	1000
PS	26	2127	952	17	26	2049	1053	17	-	1383	2074	7	26	-	782	-	-	13	36	17*	-	71	265	7	32	10	-
JCP	43	769	-	-	42	804	46	-	24	494	656	4	5	25	448	-	-	-	-	-	12	133	137	4	-	-	-
ACE	111	320	9	3	103	337	45	3	15	455	180	12	48	40	89	-	9	-	-	-	-	151	14	-	8	1	-
NJP	-	248	22	-	-	250	8	-	-	146	183	54	-	-	127	-	-	2**	-	-	-	16	33	1	9	15	53
MISC.	28	197	-	-	28	197	-	-	28	131	19	83	-	-	14	53	-	-	-	-	-	1	5	30	-	-	-
Total	208	3661	983	20	199	3637	1152	20	67	2609	3112	160	79	65	1460	53	9	15	36	17	12	372	454	42	49	26	53
	Total Units 4872				Total Units 5008				Total Units 5948																		

PS - Public Service Electric & Gas Company
JCP - Jersey Central Power & Light Company
ACE - Atlantic City Electric Company
NJP - New Jersey Power & Light Company

* Route 45M (Broadway) changed from State Highway to County Road.

** Transferred from Readington Township to Hunterdon County.

COUNTY INTERSECTION LIGHTING REIMBURSEMENT PROGRAM

1945

COUNTY	NO. OF INTERSEC.	UNITS (CANDLE POWER) 250	400	600	Total Units	COUNTY'S SHARE	STATE'S SHARE	TOTAL COST
Atlantic	61	86	4	-	90	$ 1,802.40	$ 1,802.40	$ 3,604.80
Bergen	45	-	57	14	71	1,957.57	1,957.58	3,915.15
Burlington	57	20	67	3	90	2,278.22	2,278.23	4,556.45
Camden	69	1	49	61	111	3,166.52	3,166.53	6,333.05
Cape May	41	35	16	-	51	1,091.40	1,091.40	2,182.80
Cumberland	51	53	14	10	77	1,681.00	1,681.00	3,362.00
* Essex	31	-	8	35	43	1,171.25	1,269.25	2,440.50
Gloucester	77	45	81	3	129	3,064.30	3,064.30	6,128.60
Hudson	4	-	-	7	7	218.40	218.40	436.80
Hunterdon	32	20	28	-	48	715.82	715.83	1,431.65
Mercer	37	-	24	47	71	1,685.90	1,685.90	3,371.80
Middlesex	60	2	72	25	99	2,401.07	2,401.08	4,802.15
Monmouth	77	18	76	37	131	3,712.80	3,712.80	7,425.60
Ocean	77	9	99	-	108	2,872.00	2,872.00	5,744.00
Passaic	13	-	-	22	22	686.40	686.40	1,372.80
Salem	60	40	29	23	92	2,204.10	2,204.10	4,408.20
Somerset	33	17	26	11	54	931.50	931.50	1,863.00
Sussex	48	29	25	-	54	749.29	749.29	1,498.58
Union	52	-	32	68	100	2,544.45	2,544.45	5,088.90
Warren	42	22	40	2	64	998.60	998.60	1,997.20
TOTAL	967	397	747	368	1,512	$35,932.99	$36,031.04	$71,964.03

* Includes lighting on Route 25M.

HIGHWAY LIGHTING REIMBURSEMENT

1945 Municipal Reimbursement Programs

COUNTY	UNITS (CANDLE POWER) 250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE'S SHARE	TOTAL COST
Atlantic	5	168	23		196	$ 2,323.58	$ 7,940.78	$ 10,264.36
Bergen	3	150	280		433	7,873.15	17,817.00	25,690.15
Burlington		24	30		54	933.60	2,214.00	3,147.60
Camden		316	442		758	12,630.00	31,133.00	43,763.00
Cape May		8	1		9	102.00	356.40	458.40
Cumberland	25	109	34	8	176	3,016.40	5,330.80	8,347.20
Essex		86	364		450	8,878.95	18,465.20	27,344.15
Gloucester	6	95	100	7	208	3,312.05	8,329.40	11,641.45
Hudson		52	99		151	2,750.40	6,191.00	8,941.40
Hunterdon		14			14	140.00	321.67	461.67
Mercer		129	100		229	3,880.00	9,361.02	13,241.02
Middlesex	4	92	181		277	5,066.05	11,314.20	16,380.25
Monmouth	20	226	368		614	13,138.00	25,155.60	38,293.60
Morris		81	303	84	468	11,475.80	16,332.36	27,808.16
Ocean		112	71	3	186	3,316.20	7,620.00	10,936.20
Passaic		10	85		95	1,940.50	3,895.00	5,835.50
Salem	4	47	77	4	132	2,259.00	5,186.40	7,445.40
Somerset		98	104	1	203	3,394.40	7,716.16	11,110.56
Sussex		12			12	120.00	320.00	440.00
Union		754	402		1156	17,871.55	47,433.20	65,304.75
Warren		26	48	53	127	5,858.83	3,189.63	9,048.46
Total:	67	2609	3112	160	5948	$110,280.46	$235,622.82	$345,913.28

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

ATLANTIC COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Absecon City	4 & 43	5	16		21	$ 214.20	$ 780.60	$ 994.80
Buena Vista Twp.	48		13		13	62.40	585.00	647.40
Egg Harbor Twp.	48		50		50	669.98	2,139.98	2,809.96
Egg Harbor City	43 & 50		29	8	37	459.00	1,465.20	1,924.20
Galloway Twp.	4 & 50		7		7	71.40	277.20	348.60
Hamilton Twp.	48 & 50		11		11	112.20	435.60	547.80
Hammonton, Town	43		11		11	112.20	435.60	547.80
Mullica Twp.	43		7		7	71.40	277.20	348.60
Pleasantville City	4 & 48		21	15	36	520.20	1,425.60	1,945.80
Weymouth Twp.	50		3		3	30.60	118.80	149.40
TOTAL:		5	168	23	196	$2,323.58	$7,940.78	$10,264.36

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

BERGEN COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Alpine Borough	1	3	7		10	$ 140.00	$ 456.00	$ 596.00
Carlstadt Borough	17			6	6	128.40	246.00	374.40
East Paterson Boro.	4 & 6		45		45	546.75	1,845.00	2,391.75
East Rutherford "	17			1	1	21.40	41.00	62.40
Edgewater Borough	5			28	28	599.20	1,148.00	1,747.20
Fair Lawn, Borough	4		43		43	522.45	1,763.00	2,285.45
Fairview, Borough	1 & S-1			35	35	749.00	1,435.00	2,184.00
Fort Lee, Borough	1,S-1A,5		18	48	66	1,245.90	2,706.00	3,951.90
Lodi, Borough	6		9	4	13	194.95	533.00	727.95
Lyndhurst, Twp.	17			40	40	856.00	1,640.00	2,496.00
No.Arlington Boro.	17			37	37	791.80	1,517.00	2,308.80
Palisades Park, Boro.	S1& 5			6	6	128.40	246.00	374.40
Ramsey, Borough	17		2		2	28.00	100.00	128.00
Ridgefield, Boro.	1,S-1,5,S-5			65	65	1,391.00	2,665.00	4,056.00
Ridgefield Park, Vil.	6		4	7	11	198.40	451.00	649.40
Rutherford, Boro.	17		17	1	18	227.95	738.00	965.95
Waldwick Boro.	17		5		5	60.75	205.00	265.75
Wood-Ridge, Boro.	17			2	2	42.80	82.00	124.80
TOTAL:		3	150	280	433	$7,873.15	$17,817.00	$25,690.15

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

BURLINGTON COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Bordentown City	25 & 39		7		7	$ 85.05	$ 287.00	$ 372.05
Burlington City	25 & S-25			30	30	642.00	1,230.00	1,872.00
Chester Twp.	38 & S-41		7		7	85.05	287.00	372.05
Evesham Twp.	38 & S-41		6		6	72.90	246.00	318.90
Hainesport Twp.	38		2		2	24.30	82.00	106.30
Mansfield Twp.	39		2		2	24.30	82.00	106.30
TOTAL:		-	24	30	54	$ 933.60	$2,214.00	$3,147.60

MUNICIPAL REIMBURSEMENT - 1045 AGREEMENTS

CAMDEN COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Audubon Boro.	42 & 43			36	36	$ 770.40	$ 1,476.00	$ 2,246.40
Barrington Boro.	43			10	10	214.00	410.00	624.00
Bellmawr Boro.	42			21	21	449.40	861.00	1,310.40
Berlin Boro.	43		60		60	612.00	2,376.00	2,988.00
Berlin Twp.	S-41		2		2	20.40	79.20	99.60
Brooklawn Boro	45		18		18	218.70	738.00	956.70
Camden City	25,42 & 45			51	51	1,091.40	2,091.00	3,182.40
Clementon Boro	43		22		22	224.40	871.20	1,095.60
Collingswood Boro	43 & 45			43	43	920.20	1,763.00	2,683.20
Delaware Twp.	38, 40 & 41		13	1	14	179.35	574.00	753.35
Gloucester City	45			24	24	513.60	984.00	1,497.60
Gloucester Twp.	42		39	24	63	655.00	2,888.60	3,543.60
Haddon Hgts. Boro.	42 & 43			30	30	642.00	1,230.00	1,872.00
Haddon Twp.	42, 43 & 45			43	43	920.20	1,763.00	2,683.20
Laurel Springs Boro.	43			6	6	122.40	237.60	360.00
Lawnside Boro.	43		21		21	255.15	861.00	1,116.15
Lindenwold Boro.	43		35		35	357.00	1,386.00	1,743.00
Magnolia Boro.	43			23	23	492.20	943.00	1,435.20
Mount Ephraim Boro.	42			20	20	428.00	820.00	1,248.00
Oaklyn Boro.	42 & 43			19	19	406.60	779.00	1,185.60
Pennsauken Twp.	25 & 45		55	25	80	1,203.25	3,280.00	4,483.25
Runnemede Boro.	41 & 42		5	31	36	724.15	1,476.00	2,200.15
Somerdale Boro.	43			32	32	676.80	1,300.80	1,977.60
Stratford Boro.	43		25		25	255.00	990.00	1,245.00
Voorhees Twp.	S-41		1		1	10.20	39.60	49.80
Waterford Twp.	43		20		20	204.00	792.00	996.00
Wood-Lynne Boro.	45			3	3	64.20	123.00	187.20
TOTAL:		-	316	442	758	$12,630.00	$31,133.00	$43,763.00

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

CAPE MAY COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Middle Twp.	4		1			1	$ 10.20	$ 39.60	$ 49.80
Middle Twp. Ltg. Dist. #1	4		7	1		8	91.80	316.80	408.60
TOTAL:		-	8	1	-	9	$ 102.00	$ 356.40	$ 458.40

CUMBERLAND COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Bridgeton, City	49	-	-	15	8	23	$ 642.00	$ 910.80	$ 1,552.80
Landis Twp.	47		19			19	174.40	775.00	949.40
Millville, City	47 & 49	25	90	19		134	2,200.00	3,645.00	5,845.00
TOTAL:		25	109	34	8	176	$ 3,016.40	$ 5,330.80	$ 8,347.20

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

ESSEX COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Belleville, Town	7 & 21	-	11	46	57	$ 1,118.05	$ 2,337.00	$ 3,455.05
Cedar Grove Twp.	23	-	-	84	84	1,797.60	3,444.00	5,241.60
Livingston Twp.	10	-	5	6	11	197.90	452.60	650.50
Maplewood Twp.	24	-	-	37	37	791.80	1,517.00	2,308.80
Millburn Twp.	24	-	34	-	34	448.80	1,407.60	1,856.40
Newark City	21	-	22	138	160	3,220.50	6,560.00	9,780.50
Nutley, Town	7	-	-	27	27	577.80	1,107.00	1,684.80
Verona Boro	23	-	-	23	23	492.20	943.00	1,435.20
West Orange, Town	10	-	14	3	17	234.30	697.00	931.30
TOTAL		-	86	364	450	$ 8,878.95	$18,465.20	$27,344.15

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

GLOUCESTER COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Clayton Boro	47	-	14	-	-	14	$ 142.80	$ 554.40	$ 697.20
Glassboro Boro	47	-	37	-	-	37	377.40	1,465.20	1,842.60
Greenwich Twp.	44	3	-	21	-	24	417.40	950.40	1,367.80
Harrison Twp.	45	-	2	-	-	2	20.40	79.20	99.60
Logan Twp.	44 & 51	3	5	-	-	8	81.60	286.20	367.80
Mantua Township	45	-	2	-	-	2	20.40	79.20	99.60
Monroe Township	42	-	4	-	-	4	40.80	158.40	199.20
Paulsboro Boro	44	-	-	29	-	29	491.60	1,148.40	1,640.00
West Deptford Twp.	44	-	6	-	-	6	72.90	246.00	318.90
Westville Boro	44,45 & 47	-	25	7	-	32	453.55	1,312.00	1,765.55
Woodbury City	45	-	-	43	7	50	1,193.20	2,050.00	3,243.20
TOTAL		6	95	100	7	208	$ 3,312.05	$ 8,329.40	$11,641.45

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

HUDSON COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Jersey City	1 & 25M	-	-	74	74	$ 1,583.60	$ 3,034.00	$ 4,617.60
Kearny, Town	25M	-	6	24	30	586.50	1,230.00	1,816.50
North Bergen Twp.	1 & S1	-	46	1	47	580.30	1,927.00	2,507.30
TOTAL		-	52	99	151	$ 2,750.40	$ 6,191.00	$ 8,941.40

HUNTERDON COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Clinton, Town	28	-	4	-	4	$ 40.00	$ 82.12	$ 122.12
Lambertville City	29	-	6	-	6	60.00	134.75	194.75
Readington Twp.	28	-	4	-	4	40.00	104.80	144.80
TOTAL		-	14	-	14	$ 140.00	$ 321.67	$ 461.67

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

MERCER COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Ewing Township	30	-	18	-	18	$ 218.70	$ 738.00	$ 956.70
Hamilton Twp.	33,37 & 39	-	39	67	106	1,907.65	4,346.00	6,253.65
Hightstown Boro	33	-	-	31	31	837.00	1,283.40	2,120.40
Lawrence Twp.	26 & 27	-	36	-	36	425.25	1,435.00	1,860.25
Pennington Boro	30	-	3	-	3	36.45	123.00	159.45
Princeton Boro	27 & 31	-	33	-	33	400.95	1,353.00	1,753.95
Washington Twp.	25	-	-	2	2	54.00	82.80	136.80
TOTAL		-	129	100	229	$ 3,880.00	$ 9,361.02	$13,241.02

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

MIDDLESEX COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Cranbury Twp.	25	-	2	-	2	$ 24.30	$ 82.00	$ 106.30
Dunellen Boro	28	-	-	26	26	556.40	1,066.00	1,622.40
East Brunswick Twp.	S-28	-	14	-	14	170.10	574.00	744.10
Highland Park Boro	27	-	23	-	23	279.45	943.00	1,222.45
Madison Township	4 & 35	-	11	-	11	145.20	455.40	600.60
Metuchen Boro	27	-	23	2	25	322.25	1,025.00	1,347.25
Middlesex Boro	28	-	-	35	35	749.00	1,435.00	2,184.00
New Brunswick City	S-28	-	4	46	50	1,033.00	2,050.00	3,083.00
Raritan Township	25	-	-	29	29	620.60	1,189.00	1,809.60
Sayreville Boro	4	4	10	-	14	184.80	526.80	711.60
So. Brunswick Twp.	26	-	-	1	1	21.40	41.00	62.40
Woodbridge Twp.	4 & 25	-	5	42	47	959.55	1,927.00	2,886.55
TOTAL		4	92	181	277	$ 5,066.05	$11,314.20	$16,380.25

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

MONMOUTH COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Asbury Park, City	4N	-	23	-	23	$ 303.60	$ 952.20	$ 1,255.80
Atlantic Highlands, Boro	36	-	-	8	8	216.00	331.20	547.20
Avon-by-the-Sea, Boro	4N	-	-	22	22	594.00	910.80	1,504.80
Belmar, Boro	4N & 35	-	-	29	29	782.60	1,200.60	1,983.20
Bradley Beach, Boro	4N	-	-	26	26	702.00	1,076.40	1,778.40
Brielle, Boro	4N & 35	-	-	25	25	675.00	1,035.00	1,710.00
Deal, Boro	4N	-	8	-	8	105.60	331.20	436.80
Eatontown, Boro	4N & 35	-	38	6	44	663.60	1,821.60	2,485.20
Freehold, Boro	4 & 33	-	5	13	18	417.00	745.20	1,162.20
Highlands, Boro	36	-	8	23	31	726.60	1,283.40	2,010.00
Howell Township	4 & 33	-	13	-	13	171.60	538.20	709.80
Manasquan, Boro	4N	-	-	23	23	621.00	952.20	1,573.20
Matawan, Boro	4 & 34	-	12	3	15	239.40	621.00	860.40
Middletown Twp.	35 & 36	-	24	-	24	316.80	993.60	1,310.40
Neptune City	35	-	11	14	25	523.20	1,035.00	1,558.20
Neptune Township	4N, 33 & 35	-	29	45	74	1,497.80	3,063.60	4,561.40
Ocean Township	4N & 35	-	4	7	11	241.80	455.40	697.20
Raritan Township	35 & 36	-	12	-	12	213.60	496.80	710.40
Red Bank, Boro	35	-	-	39	39	1,053.00	1,614.60	2,667.60
Sea Girt, Boro	4N	-	-	17	17	459.00	703.80	1,162.80
Shrewsbury, Boro	35	20	27	-	47	620.40	1,681.80	2,302.20
Spring Lake Hghts, Boro	4N	-	-	43	43	1,161.00	1,780.20	2,941.20
Wall Township	4N & 35	-	12	18	30	644.40	1,242.00	1,886.40
West Long Branch, Boro	4N	-	-	7	7	189.00	289.80	478.80
TOTAL		20	226	368	614	$13,138.00	$25,155.60	$38,293.60

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

MORRIS COUNTY

		UNITS (CANDLE POWER)							
MUNICIPALITY	ROUTE	250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Chatham Boro	24			30	1	31	$ 856.20	$1,283.40	$ 2,139.60
Denville Twp.	5N,10 & 6		29	62		91	1,530.00	2,285.40	3,815.40
Dover Town	6			56		56	1,120.00	1,362.63	2,482.63
Madison Boro	24				83	83	3,237.00	3,403.00	6,640.00
Morris Twp.	24 & 32			42		42	1,134.00	1,738.80	2,872.80
Morris Plains Boro	32			14		14	378.00	579.60	957.60
Morristown Town	24 & 32			97		97	2,619.00	4,015.80	6,634.80
Mt. Olive Twp.	6		9			9	90.00	184.10	274.10
Mt. Lakes Boro	6		13			13	171.60	538.30	709.80
Netcong Boro	6		4	2		6	80.00	124.45	204.45
Rockaway Boro	6		16			16	160.00	566.85	726.85
Rockaway Twp.	6		10			10	100.00	250.03	350.03
TOTAL			81	303	84	468	$11,475.80	$16,332.36	$27,808.16

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

OCEAN COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Beachwood Boro	4			15		15	$ 198.00	$ 621.00	$ 819.00
Dover Twp.	4		4	15	3	22	609.60	910.80	1,520.40
Eagleswood Twp.	4		1			1	10.20	39.60	49.80
Island Heights Boro	37		2			2	26.40	82.80	109.20
Lakehurst Boro	40		5			5	66.00	141.00	207.00
Lakewood Twp.	4,35 & 40		67			67	884.40	2,773.80	3,658.20
Point Pleasant Boro	35		23			23	303.60	952.20	1,255.80
Point Pleasant Bch	35 & 37			41		41	1,107.00	1,697.40	2,804.40
Stafford Twp.	4		3			3	30.60	118.80	149.40
Tuckerton	4		4			4	40.80	158.40	199.20
Union Twp.	4		3			3	39.60	124.20	163.80
TOTAL			112	71	3	186	$3,316.20	$7,620.00	$10,936.20

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

PASSAIC COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Little Falls Twp.	23			12		12	$ 256.80	$ 492.00	$ 748.80
Paterson City	3			73		73	1,562.20	2,993.00	4,555.20
Wayne Twp.	23		10			10	121.50	410.00	531.50
TOTAL			10	85		95	$1,940.50	$3,895.00	$5,835.50

SALEM COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Elmer Boro	48			7		7	$ 142.80	$ 277.20	$ 420.00
L.Penns Neck Twp.	44		39			39	397.80	1,544.40	1,942.20
Mannington Twp.	45	2				2	20.40	58.80	79.20
Penns Grove Boro	48			11		11	224.40	435.60	660.00
Pilesgrove Twp.	45	1				1	10.20	29.40	39.60
Quinton Twp.	49		4			4	40.80	158.40	199.20
Salem City	45			18	3	21	493.20	831.60	1,324.80
U.Penns Neck Twp.	44 & 48	1	2	20		23	438.60	900.60	1,339.20
Woodstown Boro	45 & 48		2	21	1	24	490.80	950.40	1,441.20
TOTAL		4	47	77	4	132	$2,259.00	$5,186.40	$7,445.40

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

SOMERSET COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Bedminster Twp.	31 & 32		21			21	$ 210.00	$ 540.83	$ 750.83
Bernardsville Boro	32		4	15	1	20	395.00	552.30	947.30
Bound Brook Boro	28 & 29		2	36		38	794.70	1,558.00	2,352.70
Bridgewater Twp.	28,29 & 31		18	1		19	240.10	779.00	1,019.10
Franklin Twp.	27		10			10	121.50	410.00	531.50
Greenbrook Twp.	29		7	2		9	127.85	369.00	496.85
N.Plainfield Boro	29		10	4		14	207.10	574.00	781.10
Peapack-Gladstone	31		1			1	10.00	22.03	32.03
Raritan Town	29 & 31		5	9		14	253.35	574.00	827.35
Somerville Boro	28 & 29		17	37		54	998.35	2,214.00	3,212.35
Watchung	29		3			3	36.45	123.00	159.45
TOTAL			98	104	1	203	$3,394.40	$7,716.16	$11,110.56

SUSSEX COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Hamburg Boro	23 & 31		10			10	$ 100.00	$275.00	$375.00
Sussex Boro	8N & 23		2			2	20.00	45.00	65.00
TOTAL			12			12	$120.00	$320.00	$440.00

MUNICIPAL REIMBURSEMENT - 1945 AGREEMENTS

UNION COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Cranford Twp.	28		7	31		38	$ 748.45	$1,558.00	$2,306.45
Elizabeth City	S24,26,27 & 28		167	87		254	3,890.85	10,414.00	14,304.85
Garwood Boro	28			26		26	556.40	1,066.00	1,622.40
Hillside Twp.	S24 & 29		64			64	777.60	2,624.00	3,401.60
Linden City	25 & 27		190			190	2,308.50	7,790.00	10,098.50
Mountainside Boro	29		6	2		8	115.70	328.00	443.70
Rahway, City	25 & 27		71	39		110	1,707.25	4,510.00	6,217.25
Roselle Boro	27		27			27	328.05	1,107.00	1,435.05
Roselle Park	28			54		54	1,155.60	2,214.00	3,369.60
Scotch Plains Twp.	29		9			9	109.35	369.00	478.35
Springfield Twp.	24 & S24		61	[illegible]		281	[illegible],805.20	2,525.40	13,330.60
Summit City	24		32			32	422.40	1,324.80	1,747.20
Union Twp.	24,S24 & 29		61	163		224	4,229.35	9,184.00	13,413.35
Westfield Town	28		59			59	716.85	2,419.00	3,135.85
TOTAL			754	402		1156	$17,871.55	$47,433.20	$65,304.75

WARREN COUNTY

MUNICIPALITY	ROUTE	UNITS (CANDLE POWER) 250	400	600	1000	Total Units	MUNICIPAL SHARE	STATE REIMB.	TOTAL COST
Hackettstown	6			30		30	$2,323.83	$ 766.00	$3,089.83
Lopatcong Twp.	24		9	5		14	190.00	395.00	585.00
Phillipsburg Town	24N			10	53	63	3,115.00	1,610.00	4,725.00
Washington Boro	24 & 30		17	3		20	230.00	418.63	648.63
TOTAL			26	48	53	127	$5,858.83	$3,189.63	$9,048.46

NEW JERSEY STATE HIGHWAY DEPARTMENT

ELECTRICAL DIVISION

HIGHWAY TRAFFIC SIGNAL MAINTENANCE - 1945

HIGHWAY TRAFFIC SIGNALS IN OPERATION DECEMBER 31, 1945

	MAINTENANCE				
	100% State	Joint County	Joint Municipal	Misc.	Total
Fully-Actuated Normal Green		2	1		3
Semi-Actuated Normal Green	15	45	39	2	101
Prefixed time Traffic Signals	1	2	5	1	9
Manual	2	1	1	6	10
Flashers	14	1	3	1	19
Bridge Traffic Signals	29				29
	61 *	51	49	10	171

(*) Includes 1 semi-actuated and 1 manual traffic signal not in operation during War Emergency Period.

MAINTENANCE OF HIGHWAY TRAFFIC SIGNALS

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	1945 TOTAL
ROUTINE INSPECTIONS	241	202	255	203	238	265	199	248	204	245	257	233	2790
EMERGENCY CALLS	29	11	21	24	18	16	35	20	27	21	19	17	258
TOTAL SERVICES	270	213	276	227	256	281	234	268	231	266	276	250	3048

	1944				1945			
	NO. SIGNALS	ROUTINE INSPECTIONS	EMERGENCY CALLS	TOTAL SERVICES	NO. SIGNALS	ROUTINE INSPECTIONS	EMERGENCY CALLS	TOTAL SERVICES
	133	2394	205	2599	141	2790	258	3048
Service per Signal		18.0	1.54	19.54		19.9	1.82	21.7

NEW JERSEY STATE HIGHWAY DEPARTMENT

ELECTRICAL DIVISION

CLASSIFICATION OF TRAFFIC SIGNAL MAINTENANCE

CLASS I	Municipality or county maintains equipment above the ground except controller; does relamping. State maintains underground, wiring and controller. Current cost shared.
CLASS II	Municipality pays current cost. State maintains all equipment.
CLASS III	Same as Class II except State does not do relamping.
CLASS IV	State does not participate in maintenance of signal.
CLASS V	State shares in current costs only.

NOTE "A": INSTALLED OR MAINTAINED FOR OTHER THAN COUNTY OR MUNICIPAL AGENCY

JOB NO.	ROUTE	LOCATION	AGENCY
125	1	Hudson County Boulevard, Bayonne	Hudson County Boulevard Comm.
311	3	Lincoln Tunnel Approach, No. Bergen	Port of New York Authority
2597	25	Access Road, Linden	Federal
3105	31	ASF Depot, Belle Meade	Federal
3408	34	Camp Earle Entrance, Atlantic Twp.	Federal
3534	35	Fort Monmouth Entrance, Eatontown	Federal
3539	35	Soldiers Encampment, Eatontown	Federal
3602	36	Naval Depot Pier Area, Leonardo	Federal
4405	44	Delaware Ordnance Depot, Pedricktown	Federal
9998		Ocean County Rts. 3 & 27, Ridgeway	Ocean County signal.

NORMAL GREEN TRAFFIC SIGNALS FULLY TRAFFIC ACTUATED (TOTAL 3)

JOB NO.	ROUTE	LOCATION	100% STATE MAINTAINED CLASS II EXCEPT AS NOTED
714	7	Park Avenue, Nutley	
2401	24	Millburn Avenue, Springfield	Class I
3314	33 & 35	Stokes Avenue, Neptune Township	Class III

NEW JERSEY STATE HIGHWAY DEPARTMENT

ELECTRICAL DIVISION

NORMAL GREEN TRAFFIC SIGNALS
SEMI-TRAFFIC ACTUATED

JOB NO.	ROUTE	LOCATION	100% STATE MAINTAINED EXCEPT AS NOTED
108	1	Secaucus Road, North Bergen	
110	1	Duncan Avenue, Jersey City	
120	1	Palisades Avenue, Englewood Cliffs	
197	1	Manhattan Avenue, Jersey City	
198	1	County Road, Jersey City	
304	3	Paterson Plank Road, Secaucus Plaza	
311	3	Lincoln Tunnel Approach, North Bergen	See Note "A"
400	4 & S49	Rio Grande, Middle Twp.	Class III
437	4	N. Wildwood Road, Burleigh	
454	4 & 43	Absecon	Class III
455	4 & 48	Pleasantville	Class III
462	4 & S40	Manahawkin	
464	4	Main Street, River Edge	
465	4	Paramus Road, Paramus	
466	4	Spring Valley Road, Paramus	
496	4 & 37	Toms River	
603	6 & 30	Buttzville	
604	6	Roff Avenue, Palisades Park	Class I
606	6	Two Bridges Road, Caldwell Twp.	
619	6 & 32	Parsippany	
686	6	Five Corners, Totowa	Class I
687	6	Liberty Street, Little Ferry	
711	7	**Elm Street, North Arlington & Kearny**	Class I
715	7	Schuyler Avenue, North Arlington & Kearny	Class I
1006	10	Littleton Road, Parsippany-Troy Hills	
1009	10	Livingston Avenue, Livinston	
1201	12 & 30	Church Street, Flemington	
1712	17	Allendale Avenue, Saddle River	
1713	17	Ridgewood Avenue, Paramus	
1714	17	Sheridan Avenue, Waldwick	
1715	17	Union Avenue, East Rutherford	
1717	17	Ridge Road, Rutherford	Class I
1718	17	Williams Avenue, Hasbrouck Heights	Class III
1720	17	Orient Way, Rutherford	Class I
2307	23	Bradford Avenue, Cedar Grove	
2308	23	Lindsley Avenue, Cedar Grove	
2407	24	Summit Avenue, Summit	Class I
2511	25	Stiles Street, Linden	Class I
2513	25	Avenel Avenue, Woodbridge Twp.	Class I
2514	25	Stockton Street, Hightstown	
2527	25	Grand Street, Rahway	
2528	25	Milton Avenue, Rahway	
2541	25	Lawrence Avenue, Rahway	
2564	25	Tuxedo Place, Linden	Class I
2565	25	Park Avenue, Linden	Class I
2566	25	Bachellor Avenue, Linden	Class I
2568	25	Clinton Street, Linden	Class I
2569	25	Wood Avenue, Linden	Class I

NORMAL GREEN TRAFFIC SIGNALS (Cont.)

JOB NO.	ROUTE	LOCATION	100% STATE MAINTAINED EXCEPT AS NOTED
2571	25	Myrtle Avenue, Elizabeth	Class I
2575	25	Hampton Street, Linden	Class I
2595	25	Yardville-Allentown Road, Hamilton Twp.	
2608	26	Slack Avenue, Lawrence Twp.	
2702	27	Harney's Corner, Lawrence Twp.	
2703	27	Inman Avenue, Rahway	Class I
2704	27	West Scott Avenue, Rahway	Class I
2705	27	West Milton Avenue, Rahway	Class I
2802	28	Leigh Street, Clinton	Class I
2813	28	Locust Street, Roselle Park	Class I
2831	28	Terrill Road, Plainfield	Class I
2916	29	New Providence Road, Mountainside Twp.	Class I
2934	29	Chimney Rock Road, Bridgewater Twp.	
2935	29	Mountain Avenue, Bound Brook	
3003	30	Parkside Avenue, Ewing Twp.	
3013	30	Parkway Avenue, Trenton	
3014	30	Olden Avenue, Ewing Twp.	
3102	31	Somerset Street, Raritan	Class I
3213	32	Blazier's Corner, Bernardsville	Class I
3307	33	Main Street, Freehold	
3311	4 & 33	South Street, Freehold	
3402	34	Monmouth County Road #1, Colts Neck	
3405	4 & 34	Main Street, Matawan	
3507	35	Warren Avenue, Spring Lake Heights	
3517**	35 & 4N	8th Avenue, River Road, Belmar	
3524	35	Broadway, Keyport	
3537	35	Cliffwood Avenue, Cliffwood	
3548	4N	Warren Avenue, Spring Lake Heights	
3601	36	Palmer Avenue, Keansburg	Class I
3604	36	Broad Street, Keyport	Class I
3702	37	Bridge Street, Bayhead	Class I
3805	38	Chapel Avenue, Delaware Twp.	
3912	39 & 43	Hammonton	Class I
4101	41 & 42	Clements Bridge Road, Clementon	
4203	42	Sandy Lane, Bellmawr	
4205	42	Nicholson Road, Haddon Twp.	
4208	42	Clementon-Blackwood Road, Gloucester Twp.	
4312	43	Kings Highway, Audubon	
4313	43	Warwick Road, Magnolia	
4314	43	Evesham Road, Magnolia	
4406	44 & 48	Penns Grove	Class III
4451	44 & S44	Bridgeport	
4509	45	Haddon Avenue, Collingswood	
4510	45	Nicholson Road, Gloucester City	
4515	45	Market Street, Gloucester City	
4516	45	Highland Boulevard, Gloucester City	Class I
4707	47 & 48	Old Delsea Drive, Malaga	
4803 *	48 & 50	Cape May Avenue, Mays Landing	
4804	48 & 50	Harding Highway, Mays Landing	Class III
5105	S1	Edgewater Avenue, Ridgefield	Class I

NORMAL GREEN TRAFFIC SIGNALS (Cont.)

JOB NO.	ROUTE	LOCATION	100% STATE MAINTAINED EXCEPT AS NOTED
6602	4N & 35	Eatontown	Class III
6707	5N & 6	Denville	
7501	25	Federal Street, Camden	Class I
7502	25M	Hackensack Avenue, Kearny	Class I
9994		Lakehurst Road, Ridgeway	(Ocean County Signal)

(*) War Duration - removed from service 3/5/43. Restored to service 9/13/45.
(**) Turned off for War Duration 4/23/42.

PREFIXED TIME TRAFFIC SIGNALS
(Total 9)

JOB NO.	ROUTE	LOCATION	100% STATE MAINTAINED EXCEPT AS NOTED
125	1	Hudson County Boulevard, Bayonne	see Note "A"
308	3	Secaucus Plaza (east), Secaucus	
309	3	County Avenue, Secaucus	
322	3	Roosevelt Avenue, Secaucus	Class I
713	7	Passaic Avenue, Nutley	Class I
2515	25	High Street, Burlington	
3009	28 & 30	Clinton Point, Clinton	
3110	29 & 31	Mountain Avenue, Somerville	Class I
6601	4N & 33	Corlies Avenue, Neptune	Class III

MANUAL CONTROL TRAFFIC SIGNALS
(Total 10)

JOB NO.	ROUTE	LOCATION	100% STATE MAINTAINED EXCEPT AS NOTED
2597	25	Access Road, Linden	see Note "A"
2709	27	Plainfield Avenue, Stelton	Class I
3408	34	Camp Earle Entrance, Atlantic Twp.	see Note "A"
3534	35	Fort Monmouth Entrance, Eatontown	see Note "A", Class III
3539	35	Soldiers Encampment, Eatontown	see Note "A"
3598 **	35	Edison Bridge (Lane Control), Raritan River	
3602	36	Naval Depot Pier Area, Leonardo	see Note "A"
4405	44	Delaware Ordnance Depot, Pedricktown	see Note "A", Class III
7503	25	Depressed Roadway (Lane Control), Jersey City	

(**) Turned off for War Duration 4/30/43.

FLASHING TRAFFIC SIGNALS
(Total 19)

JOB NO.	ROUTE	LOCATION	100% STATE MAINTAINED EXCEPT AS NOTED
403	4 & 25	Woodbridge Cloverleaf	
2301	23	Greenwood Avenue, Mountainview	Class III
2530	25	Elizabeth Viaduct, Elizabeth	

FLASHING TRAFFIC SIGNALS (Cont.)

JOB NO.	ROUTE	LOCATION	100% STATE MAINTAINED EXCEPT AS NOTED
2537	25	Newark Viaduct, Newark	
2555	25	South Street Ramp, Newark	
2606	26	Jersey Avenue, New Brunswick	
2801	28	Shimer's Corner, Phillipsburg	
3022	30	East Main Street, Flemington	
3105	31	A.S.F. Depot Entrance, Belle Meade	
3302	33	Colts Neck-Farmingdale Road, Howell Twp.	
3407	34	Hurleystown Schoolhouse Road, Wall Township	
3516	35	Deal Road, Ocean Township	
3526	35	Sea Girt Avenue, Wall Twp.	
4709	47	Academy Street, Clayton	
4805	48	Old Delsea Drive, Malaga	
6004	S28	Milltown-South River Road, E. Brunswick Twp.	
6623	4N	Sixteenth Avenue, Belmar	
7517	25	Hazelwood Avenue.Ramp, Rahway	
7520	25	Wilson Avenur Ramp, Newark	

SYNCHRONIZED TRAFFIC SIGNALS OR FLASHERS

JOB NO.	ROUTE	LOCATION	
197	1	Manhattan Avenue, Jersey City	Group A
198	1	County Road, Jersey City	
309	3	County Avenue, Secaucus	Group B
322	3	Roosevelt Avenue, Secaucus	
711	7	Elm Street, North Arlington & Kearny	Group C
715	7	Schuyler Avenue, North Arlington & Kearny	
2511	25	Stiles Street, Linden	Group D
2564	25	Tuxedo Place, Linden	
2566	25	Bachelor Avenue, Linden	
2568	25	Clinton Street, Linden	
2569	25	Wood Avenue, Linden	
2571	25	Myrtle Avenue, Linden	
2575	25	Hampton Street, Linden	
2567	25	* Standard Oil Drive, Linden	
2572	25	* Gordon Plant Drive, Linden	
2573	25	* General Motors Drive (South), Linden	
2574	25	* General Motors Drive (North), Linden	
2527	25	Grand Street, Rahway	Group E
2528	25	Milton Avenue, Rahway	
2541	25	Lawrence Avenue, Rahway	
4510	45	Nicholson Road, Gloucester City	Group F
4515	45	Market Street, Gloucester City	
4516	45	Highland Boulevard, Gloucester City	

(*) Not State Maintained.

NEW JERSEY STATE HIGHWAY DEPARTMENT

ELECTRICAL DIVISION

NEW SIGNALS OR FLASHERS INSTALLED

JOB NO.	ROUTE	LOCATION	TYPE	DATE IN SERVICE
2515	25	High Street, Burlington	Prefixed Time	7/10/45
2537	25	Newark Viaduct, Newark	Flasher	4/12/45
2597	25	Access Road, Linden	Manual Control	9/12/45
3408	34	Camp Earle Entrance, Atlantic Township	Manual Control	12/18/45
3602	36	Naval Depot Pier Area, Leonardo	Manual Control	5/10/45
4709	47	Academy Street, Clayton	Flasher	10/ 8/45

SIGNALS RESTORED TO SERVICE

JOB NO.	ROUTE	LOCATION	TYPE	DATE RECONNECTED
4803	48 & 50	Cape May Ave., Mays Landing	Semi-Actuated	9/13/45

SIGNALS CHANGED TO NORMAL GREEN FROM NORMAL OUT

JOB NO.	ROUTE	LOCATION	TYPE	DATE
711	7	Elm Street, No. Arlington	Semi-Actuated	5/3/45

SIGNALS MAINTAINED BY DIVISION FORCES NOT ON STATE HIGHWAYS

JOB NO.	ROUTE	LOCATION		DATE
9994	-	County Rds., 3 & 27, near Lakehurst	Cost of Maintenance charged entirely to Ocean County	9/17/45

SIGNALS INSTALLED - NOT IN OPERATION DURING WAR EMERGENCY PERIOD

JOB NO.	ROUTE	LOCATION	DATE DISCONNECTED
3517	4N & 35	8th Ave., River Road, Belmar	4/23/42
3598	35	Edison Bridge (Lane Control) Raritan River	4/30/43
4803	48 & 50	Cape May Avenue, Mays Landing (See Signals Restored above)	3/ 5/43

(NOTE:) No signals were removed from service during 1945.

TRAFFIC SIGNALS - NOT STATE MAINTAINED
CURRENT REIMBURSEMENT ONLY
CLASS V

JOB NO.	ROUTE	LOCATION
701	7 & 17	Kearny-North Arlington
2507	25	Maple Avenue, Elizabeth
2518	25	Grier Avenue, Elizabeth
2542	25	South Broad Street, Elizabeth
2547	25	North Avenue, Elizabeth
2548	25	Mary Street, Elizabeth
2549	25	Flora Street, Elizabeth
2550	25	Anna Street, Elizabeth
2551	25	Bond Street, Elizabeth
2552	25	E. Grand Street, Elizabeth
2553	25	E. Jersey Avenue, Elizabeth
2932	29	Somerset Avenue, N. Plainfield
2933	29	Watchung Avenue, North Plainfield
4407	44 & 45	Westville

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION

ELECTRIC CAUTIONARY AND DIRECTIONARY SIGNS
IN SERVICE DECEMBER 31, 1945

			KIND			TYPE		
JOB NO.	ROUTE	LOCATION	CAUTIONARY	DIRECTIONARY	TOTAL	INCANDESCENT	FLUORESCENT	NEON
111	1 & 3	North Bergen Circle	3	10	13	13	-	-
116	1-10-25	Tonnele Ave.Circle, Jersey City	-	20	20	17	3	-
** 117	1 & 10	Wallis Avenue Circle, Jersey City	4	16	20	20	-	-
119	1	Broad Ave. Circle, Ridgefield	3	7	10	-	10	-
146	1-4-6	George Washington Bridge Plaza	1	26	27	27	-	-
303	3-4-6	Paterson	-	3	3	-	3	-
312	3	Lincoln Tunnel Approach	*10	12	22	14	8	-
403	4 & 25	Woodbridge Cloverleaf	-	20	20	20	-	-
408	4 & 35	South Amboy Circle	1	5	6	6	-	-
414	4 & 33	Freehold Circle	5	15	20	20	-	-
440	4 & S4	Perth Amboy Circle	4	8	12	-	12	-
448	4	Cheesequake Control	-	4	4	-	4	-
605	6 & 23	Singac Circle	4	15	19	19	-	-
607	6 & 31	Netcong Grade Separation	3	16	19	19	-	-
609	6 & 10	Ledgewood Circle	4	9	13	13	-	-
618	6	Depressed Roadway, Palisades Park	-	2	2	2	-	-
629	6	Bloomfield Avenue, Montville Twp.	-	4	4	-	4	-
1007	10	Lake Hopatcong Rd. Grade Separation	2	5	7	7	-	-
1202	12-29-30	Flemington Circle	4	12	16	-	16	-
1704	17 & 4	Paramus Cloverleaf	-	12	12	12	-	-
1718	17 & 6	Grade Sep., Hasbrouck Heights	-	10	10	-	10	-
2310	23	Smith Mills Control	-	2	2	-	2	-
2403	24 & 28	Still Valley Circle	3	5	8	-	8	-
2404	24 & 28	Grade Separation, Lopatcong	2	2	4	-	4	-
2405	24 & 28	Straw Church Circle	3	6	9	-	9	-
2503	25-38-40-45	Camden Airport	5	10	15	-	15	-
2519	25	Pulaski Skyway Down Ramp	-	3	3	3	-	-
2520	25 & S26	North Brunswick Circle	4	13	17	-	17	-
2524	25	Woodbridge Ave., Raritan Twp.	-	1	1	1	-	-
2532	21-25-29	Newark Junction	3	11	14	14	-	-
2554	25 & S25	Burlington	-	1	1	1	-	-
2557	25	Bay Way Circle	5	8	13	-	13	-
2558	25 & 33	Hightstown By-Pass	-	2	2	2	-	-
2577	25	Green Street (Circle and	2	10	12	12	-	-
2577	25 & 35	Woodbridge Grade Separation)	-	6	6	4	2	-
2602	26	Penns Neck Circle & Approach	7	4	11	8	1	2
2606	26	Jersey Avenue, New Brunswick	1	-	1	1	-	-
2609	26 & 27	Trenton Circle	3	9	12	-	-	12
2906	28-29-31	Somerville Circle	5	13	18	18	-	-

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION

ELECTRIC CAUTIONARY AND DIRECTIONARY SIGNS
IN SERVICE DECEMBER 31, 1945

			KIND			TYPE		
JOB NO.	ROUTE	LOCATION	CAUTIONARY	DIRECTIONARY	TOTAL	INCANDESCENT	FLUORESCENT	NEON
2909	29	Mountain Avenue Circle	1	6	7	7	-	-
2926	29	Westfield Avenue, Mountainside	-	4	4	-	4	-
2930	29 & S24	Morris Avenue, Union	-	7	7	7	-	-
3310	33 & 34	Collingswood Park	2	6	8	8	-	-
3312	33 & 34	Hurley's Corner	4	11	15	15	-	-
3504	34 & 35	Brielle Circle	4	14	18	-	18	-
3506	35	Asbury Avenue Circle	4	14	18	-	18	-
3509	35 & 36	Keyport Control	3	2	5	-	5	-
3512	35	Morgan Grade Separation	-	2	2	2	-	-
3529	35	Maple Ave. & Broad St., Red Bank	-	2	2	-	2	-
3533	35 & 4	South Amboy Appr. to Edison Bridge	-	5	5	5	-	-
3536	35	Catherine Street, South Amboy	1	-	1	-	-	1
3571	35 & 4	Main Street Control, South Amboy	-	4	4	4	-	-
3801	38-41-S41	Kings Highway Circle	6	12	18	-	18	-
3802	38 & 40	Browning Road Circle	6	15	21	-	21	-
4002	40 & S41	Marlton Circle, Evesham Township	4	10	14	-	14	-
4005	39 & 40	Red Lion Circle	4	12	16	-	16	-
4006	34-35-40	Laurelton Circle	5	14	19	19	-	-
4207	42 & 48	McKee City Circle	2	6	8	-	-	8
4310	43 & 50	Egg Harbor City	-	1	1	-	1	-
4341	43 & 45	Collingswood Circle	4	10	14	-	14	-
6003	25 & S28	New Brunswick Circle	4	8	12	12	-	-
6201	40 & S40	Four Mile, Ongs Hat Circle	5	14	19	-	19	-
6305	S41 & 43	Berlin Grade Separation	-	2	2	-	2	-
7505	25	Pulaski Skyway, Lockwood St. Ramp	-	1	1	1	-	-
7506	25	Pulaski Skyway, Kearny & Brdwy Ramp	-	2	2	2	-	-
7508	25	Pulaski Skyway	5	-	5	-	5	-
7515	25 & 39	Ward Avenue, Bordentown	-	2	2	-	2	-
7516	25 & 39	South of Butts Ave., Bordentown	-	3	3	-	3	-
		67 Jobs	155	526	681	354	304	23

* Red Island Markers.
** Additional new installation during 1945.

New Signs Installed During 1945

117	1-10	Wallis Ave. Circle (Additional)	-	2	2	2	-	-

NEW JERSEY STATE HIGHWAY DEPARTMENT
ELECTRICAL DIVISION

ELECTRIC CAUTIONARY AND DIRECTIONARY SIGNS

CONSTRUCTION WORK SUSPENDED FOR DURATION OF WAR

			KIND			TYPE		
JOB NO.	ROUTE	LOCATION	CAUTIONARY	DIRECTIONARY	TOTAL	INCANDESCENT	FLUORESCENT	NEON
2327	23	Black Oak Ridge Road	5	9	14	-	14	-
4801	48	Tilton Rd., Margate Road	1	6	7	-	-	7
4802	48	Harding Highway-Tilton Road Circle	2	8	10	-	-	10
6625	4N-35	Eatontown Circle	5	9	14	-	14	-
		4 Locations Total	13	32	45	-	28	17

Construction Started During 1945 - Not Completed

631	6-6A	Dover	2	-	2	-	-	2

ANNUAL REPORT

OF THE

EQUIPMENT DIVISION

NEW JERSEY STATE HIGHWAY DEPARTMENT

FOR THE YEAR

1945

Fernwood Service Station
Trenton, New Jersey.

May 1st.
1946.

Mr. Eugene V. Connett,

Executive Assistant to the State Highway Commission

State House Annex

Trenton, New Jersey.

Dear Sir:

Submitted herewith is the yearly report of the Division of Plant & Equipment, New Jersey State Highway Department for the year 1945.

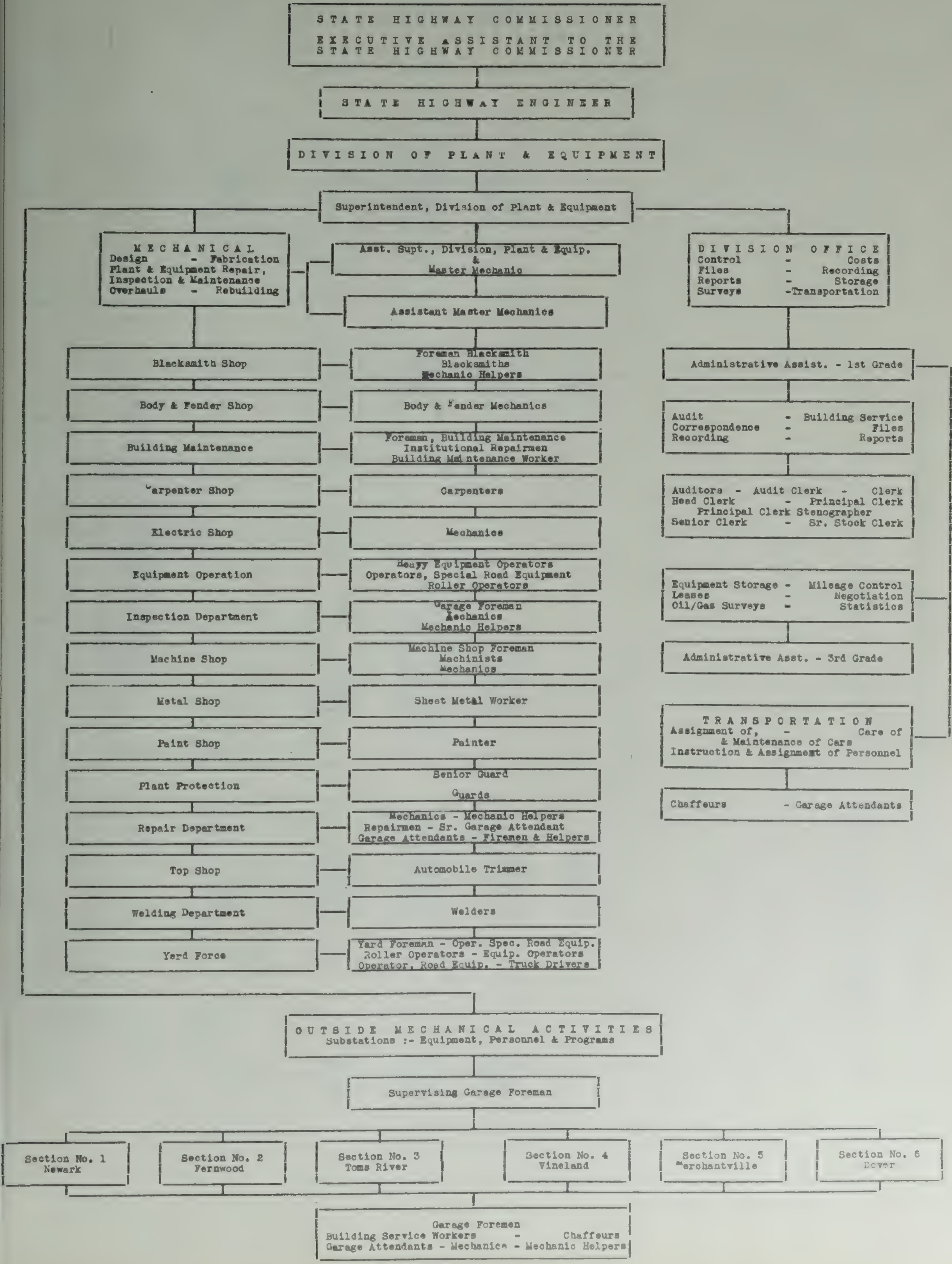
I am deeply grateful to all my associates in the department and to the personnel of this division and wish to thank all for their valuable cooperation and assistance during the year.

Respectfully submitted

Frank C. Young

Frank C. Young
Superintendent of Plant & Equipment

FCY/h



STATE HIGHWAY COMMISSIONER

EXECUTIVE ASSISTANT TO THE STATE HIGHWAY COMMISSIONER

STATE HIGHWAY ENGINEER

DIVISION OF PLANT & EQUIPMENT

Superintendent, Division of Plant & Equipment

MECHANICAL
Design - Fabrication
Plant & Equipment Repair,
Inspection & Maintenance
Overhauls - Rebuilding

Asst. Supt., Division, Plant & Equip.
&
Master Mechanic

Assistant Master Mechanics

Blacksmith Shop	Foreman Blacksmith Blacksmiths Mechanic Helpers
Body & Fender Shop	Body & Fender Mechanics
Building Maintenance	Foreman, Building Maintenance Institutional Repairmen Building Maintenance Worker
Carpenter Shop	Carpenters
Electric Shop	Mechanics
Equipment Operation	Heavy Equipment Operators Operators, Special Road Equipment Roller Operators
Inspection Department	Garage Foreman Mechanics Mechanic Helpers
Machine Shop	Machine Shop Foreman Machinists Mechanics
Metal Shop	Sheet Metal Worker
Paint Shop	Painter
Plant Protection	Senior Guard Guards
Repair Department	Mechanics - Mechanic Helpers Repairmen - Sr. Garage Attendant Garage Attendants - Firemen & Helpers
Top Shop	Automobile Trimmer
Welding Department	Welders
Yard Force	Yard Foreman - Oper. Spec. Road Equip. Roller Operators - Equip. Operators Operator, Road Equip. - Truck Drivers

DIVISION OFFICE
Control - Costs
Files - Recording
Reports - Storage
Surveys -Transportation

Administrative Assist. - 1st Grade

Audit - Building Service
Correspondence - Files
Recording - Reports

Auditors - Audit Clerk - Clerk
Head Clerk - Principal Clerk
Principal Clerk Stenographer
Senior Clerk - Sr. Stock Clerk

Equipment Storage - Mileage Control
Leases - Negotiation
Oil/Gas Surveys - Statistics

Administrative Asst. - 3rd Grade

TRANSPORTATION
Assignment of, - Care of
& Maintenance of Cars
Instruction & Assignment of Personnel

Chaffeurs - Garage Attendants

OUTSIDE MECHANICAL ACTIVITIES
Substations :- Equipment, Personnel & Programs

Supervising Garage Foreman

Section No. 1
Newark

Section No. 2
Fernwood

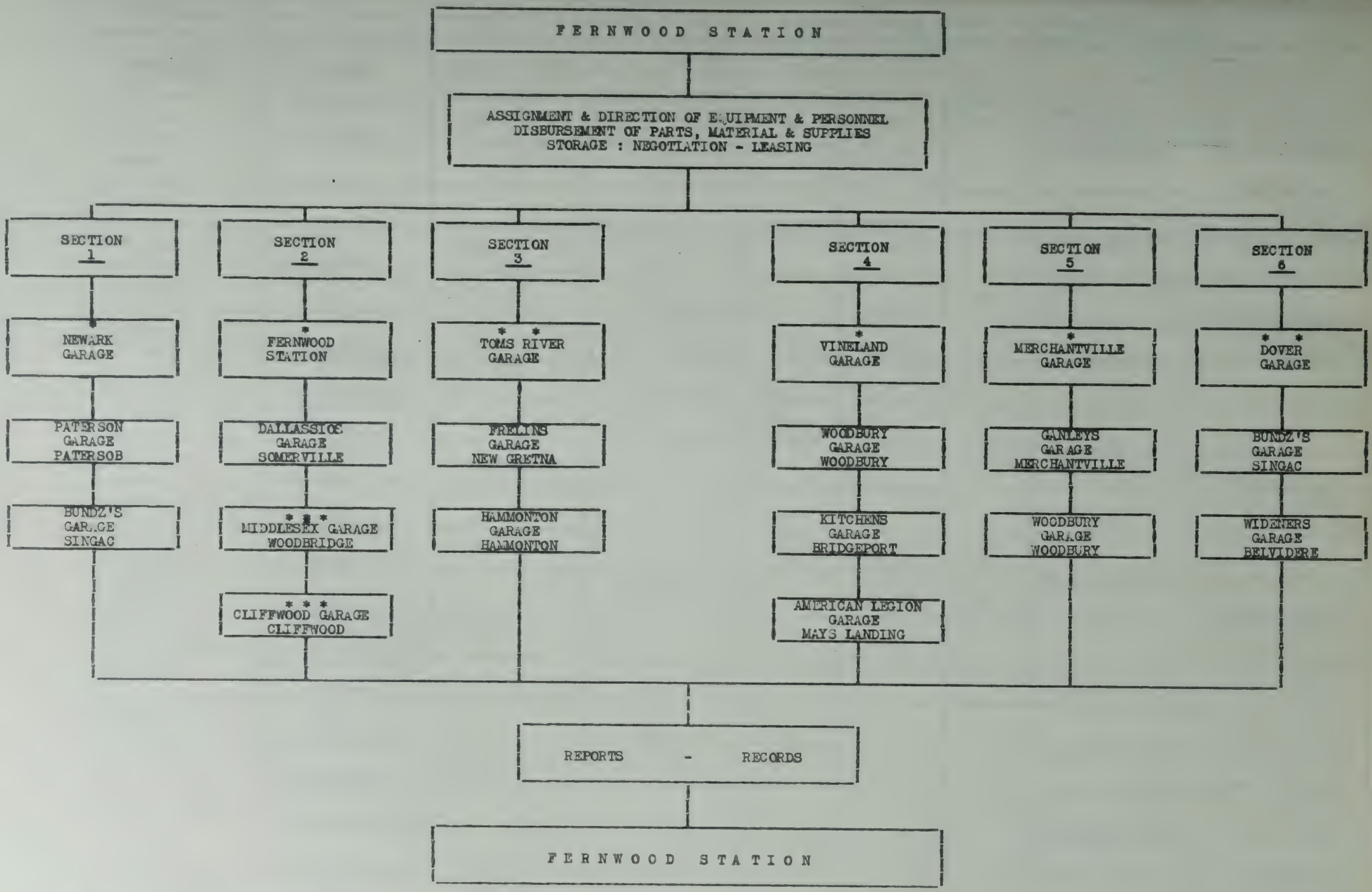
Section No. 3
Toms River

Section No. 4
Vineland

Section No. 5
Merchantville

Section No. 6
Dover

Garage Foremen
Building Service Workers - Chaffeurs
Garage Attendants - Mechanics - Mechanic Helpers


FERNWOOD STATION
ASSIGNMENT & DIRECTION OF EQUIPMENT & PERSONNEL
DISBURSEMENT OF PARTS, MATERIAL & SUPPLIES
STORAGE : NEGOTIATION - LEASING
SECTION 1
* NEWARK GARAGE
PATERSON GARAGE PATERSOB
BUNDZ'S GARAGE SINGAC
SECTION 2
* FERNWOOD STATION
DALLASSIOE GARAGE SOMERVILLE
* * * MIDDLESEX GARAGE WOODBRIDGE
* * * CLIFFWOOD GARAGE CLIFFWOOD
SECTION 3
* * TOMS RIVER GARAGE
FRELINS GARAGE NEW GRETNA
HAMMONTON GARAGE HAMMONTON
SECTION 4
* VINELAND GARAGE
WOODBURY GARAGE WOODBURY
KITCHENS GARAGE BRIDGEPORT
AMERICAN LEGION GARAGE MAYS LANDING
SECTION 5
* MERCHANTVILLE GARAGE
GANLEYS GARAGE MERCHANTVILLE
WOODBURY GARAGE WOODBURY
SECTION 6
* * DOVER GARAGE
BUNDZ'S GARAGE SINGAC
WIDENERS GARAGE BELVIDERE
REPORTS - RECORDS
FERNWOOD STATION

* - Service, Gas & Oil available 24 hours per day.
* * - Service, Ges & Oil available - normal working hours and during Snow Call.
* * * - Gas & Oil available - normal working hours and during Snow Call.

BREAKDOWN OF DIVISIONAL ADMINISTRATIVE AND WORK PROGRAM, DISBURSEMENT AND RECORDING CONTROL

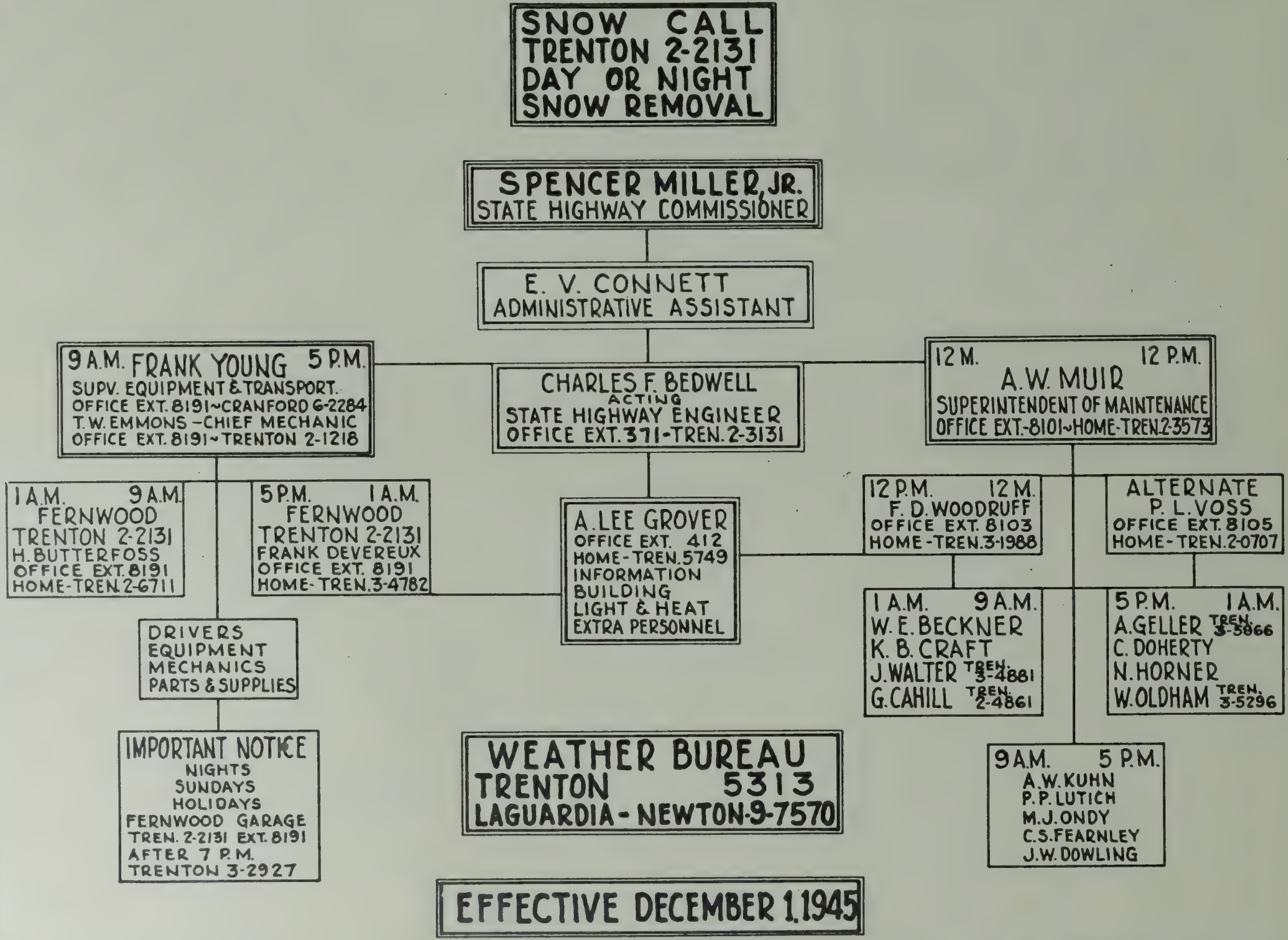
SUPPLEMENTARY ORGANIZATION CHART : Description and services available at the principal highway garages and substations

DESIGNATION	LOCATION	SECTION SERVED	SERVICE AVAILABLE AT EACH						REMARKS
			GAS	OIL	REPAIRS	CLEANING	GREASING	STORAGE	
FERNWOOD	Scotch Road Trenton	All	X	X	X	X	X	X	Administration, control and recording of all major activities; direction & assignment all personnel & equipment
NEWARK	Routes 21 & 29 Newark	1	X	X	X	X	X	X	Headquarters for Section No. 1
PATERSON	641 Madison Ave. Paterson	1		X By Appt		X By Appt.	X By Appt.		
FERNWOOD	Scotch Road Trenton	All	X	X	X	X	X	X	Also serves as the headquarters for Section No. 2
SOMERVILLE	N. Gaston Avenue Somerville	2			X By Appt.		X By Appt.	X	Mechanic present approx. half of each day
WOODBRIDGE	St. George Ave. Woodbridge	2	X	X	X By Appt.	X By Appt.	X By Appt.	X	Gas Tank for this garage located at Maintenance Yard at the Cloverleaf
NEW BRUNSWICK	Suydam Street New Brunswick	2	X	X	X By Appt.	X By Appt.	X By Appt.	X	
CLIFFWOOD	So. Amboy Rd. Cliffwood	2	X	X	X By Appt.	X By Appt.	X By Appt.	X	
TOMS RIVER	Flint Road So. Toms River	3	X	X	X	X	X	X	Headquarters for Section No. 3
HENKENS GARAGE	Route 40 Vincentown	3						X	
HAMMONTON	Egg Harbor Road Hammonton	3					X By Appt.	X	
VINELAND	Route 47 Vineland	4	X	X	X	X	X	X	Headquarters for Section No. 4
MAYS LANDING	American Legion Building Belcoville	4					X	X	
WOODBURY	Mantua Road Woodbury	4 & 5						X	
KITCHENS GARAGE	Route 44 Bridgeport	4						X	
MERCHANTVILLE	So. Maple Ave. Merchantville	5	X	X	X	X	X	X	Headquarters for Section No. 5
GANLEY'S GARAGE	So. Maple Ave. Merchantville	5						X	
DOVER	E. Blackwell St. Dover	6	X	X	X	X	X	X	Headquarters for Section No. 6
BUNDZ'S GARAGE	Singac Circle Singac	6					X By Appt.	X	
BELVIDERE	Wideners Garage Belvidere	6			X By Appt.		X By Appt.	X	

By Appt. : To arrange appointment contact the headquarters of the individual section or Fernwood Garage,

New Jersey
State Highway Department

SNOW REMOVAL
1945 1946



SNOW CALL
TRENTON 2-2131
DAY OR NIGHT
SNOW REMOVAL

SPENCER MILLER, JR.
STATE HIGHWAY COMMISSIONER

E. V. CONNETT
ADMINISTRATIVE ASSISTANT

9 A.M. FRANK YOUNG 5 P.M.
SUPV. EQUIPMENT & TRANSPORT.
OFFICE EXT. 8191~CRANFORD 6-2284
T. W. EMMONS – CHIEF MECHANIC
OFFICE EXT. 8191~TRENTON 2-1218

CHARLES F. BEDWELL
ACTING
STATE HIGHWAY ENGINEER
OFFICE EXT. 371-TREN. 2-3131

12 M. 12 P.M.
A. W. MUIR
SUPERINTENDENT OF MAINTENANCE
OFFICE EXT.-8101~HOME-TREN.2-3573

1 A.M. 9 A.M.
FERNWOOD
TRENTON 2-2131
H. BUTTERFOSS
OFFICE EXT. 8191
HOME-TREN. 2-6711

5 P.M. 1 A.M.
FERNWOOD
TRENTON 2-2131
FRANK DEVEREUX
OFFICE EXT. 8191
HOME-TREN. 3-4782

A. LEE GROVER
OFFICE EXT. 412
HOME-TREN. 5749
INFORMATION
BUILDING
LIGHT & HEAT
EXTRA PERSONNEL

12 P.M. 12 M.
F. D. WOODRUFF
OFFICE EXT. 8103
HOME-TREN. 3-1988

ALTERNATE
P. L. VOSS
OFFICE EXT. 8105
HOME-TREN. 2-0707

DRIVERS
EQUIPMENT
MECHANICS
PARTS & SUPPLIES

1 A.M. 9 A.M.
W. E. BECKNER
K. B. CRAFT
J. WALTER TREN. 3-4881
G. CAHILL TREN. 2-4861

5 P.M. 1 A.M.
A. GELLER TREN. 3-5866
C. DOHERTY
N. HORNER
W. OLDHAM TREN. 3-5296

IMPORTANT NOTICE
NIGHTS
SUNDAYS
HOLIDAYS
FERNWOOD GARAGE
TREN. 2-2131 EXT. 8191
AFTER 7 P.M.
TRENTON 3-2927

WEATHER BUREAU
TRENTON 5313
LAGUARDIA - NEWTON-9-7570

9 A.M. 5 P.M.
A. W. KUHN
P. P. LUTICH
M. J. ONDY
C. S. FEARNLEY
J. W. DOWLING

EFFECTIVE DECEMBER 1, 1945

PERSONNEL

1945.

PERIOD	EMPLOYED	RESIGNED	LAID OFF	DECEASED	TRANS-FERRED. TO DIVISION	FROM DIVISION	EMPLOYEES ADD	LESS	TOTAL
Jan.1 to 16	1					1	1	1	203
Jan.16 to 31				1				1	202
Feb.1 to 14						1		1	201
Feb.15 to 28									201
Mar.1 to 16									201
Mar.16 to 31		1						1	200
Apr. 1 to 15		1						1	199
Apr.16 to 30									199
May 1 to 16									199
May 16 to 31	2						2		201
June 1 to 15									201
June 16 to 30									201
July 1 to 16	2						2		203
July 16 to 31									203
Aug. 1 to 16									203
Aug. 16 to 31	1						1		204
Sept. 1 to 15	1						1		205
Sept. 16 to30									205
Oct. 1 to 16	2						2		207
Oct.16 to 31		1						1	206
Nov. 1 to 15			3					3	203
Nov.16 to 30									203
Dec.1 to 16									203
Dec. 16 to 31	3						3		206
TOTALS	12	3	3	1		2	12	9	

Average number of employees for year 203

WORK EXECUTED DURING 1945.

Separate and apart from routine care and maintenance required in the regular conditioning and servicing of 2560 units of road and shop equipment, 539 assignments of major character were completed during the year. Of this number 130 represented work programs completed for agencies other than the Equipment Division as shown by the following:

Highway Department,	Administration	4	Orders
" ,	Construction Division	1	"
" ,	Electrical	20	"
" ,	Laboratory	12	"
" ,	Maintenance	56	"
" ,	Purchase & Stores	4	"
" ,	Right of Way	2	"
" ,	Statewide Highway Survey	3	"
" ,	Survey & Plans	15	"

OUTSIDE AGENCIES.

State, Attorney General	1	Order
" , Civil Service Commission	2	"
" , Department of Labor	2	"
" , Department of Motor Vehicles	2	"
" , Department of Property & Purchase	6	"

CHARACTER OF WORK PERFORMED.

Automobile Repairs, Bars, Barricades, Batter Boards, Battery Carriers, Bearing Work, Bins, Bolts, Brackets, Brake Overhauls, Brass Machining, Bushings, Cabinet work, Carpenter Work, Carriers, Caution Signs, Curb Panels, Dowells, Drilling Boards, Eye Bolts, Fabrication (all types of metal and machinery), Filing Rack, Flags, Flag Pins, Funnels, Furniture Repairs, General Repairs, and Machine Work, Hinges, Lamp Brackets, Latches, Machine Work, Metal Covers, Metal Dowells, Motor Repairs, Mufflers, Nuts, Partitions, Pins, Pipe Gratings, Pipe Jack Repairs, Pipe Work, Plates, Power Takeoff (Installation and Repairs), Road Drags, Rods, Rod Handles, Rod Racks, Scoops, Shelving, Shovels, Snow Pushers, Stands, Storm Sash, Studs, Tags, Tarpaulins, Tool Boxes, Tool Sharpening, Transmission Repairs, Truck Covers, Truck Skids, Washers, Wedges, Welding Work (Acetylene and Electric), Wheel Work and Wood Work.

ire, mats, Barricades, Butter Boards, Battery Carrier

work,

tors, [illegible] Repairs, and Welding Work, Fixtures, Lamp Brackets,
ders, Machine Work, Metal Covers, Motor Details, Motor Repairs,
rs, Nuts, Partitions, Pins, Pipe Castings, Pipe Rack Repairs,
Work, Plates, Power Factory (Installation and [illegible]), [illegible]
[illegible] Hooks, Doors, Shafts, [illegible], Shop [illegible]
[illegible], Tool Bars
[illegible], Sheets, Nuts,
[illegible] and Electric), Wheel Work and Wood Work.

ROAD CONSTRUCTION, MAINTENANCE & REPAIR ACTIVITIES.

During the year, the division was called upon to furnish equipment labor and materials for programs upon the following roads, bridges, and projects:

Route No. 27 - Albany Street Bridge.
Bordentown State Prison Farm
Bridgeton Armory
Camp Earl, U.S.N. Ammunition Depot.
Carranza Memorial
Cheesequake Park
Crosswicks Creek Bridge - Route 25
Delaware & Raritan Canal Bridge - Millstone
Delaware & Raritan Canal Bridge - Titusville
Delaware Ordnance Depot
Four Mile Colony
Greystone Park
Manasquan River Bridge - Route 4.
Marboro Hospital
Millville Armory
Mt. Airy Bridge - Route 29
N. J. State Woman's College, New Brunswick
Navy Program At Princeton College
Office of Civilian Defense
112 Field Artillery Headquarters - Trenton
Parking Lot Memorial Building - Trenton
Rockaway Bridge - Route 6
Route 25 - Princeton
" 27 - Kilmer
" 28 - Phillipsburg
" 29 - Mountainside
" 40
" 43 - Absecon
Skillman Village
Soldiers Home - Vineland
State Hospital - Trenton
State Police - Wilburtha
Victory Bridge - Perth Amboy
Vineland State School - Vineland
Voorhees State Park
Washington Crossing State Park
Wittpen Bridge

POLICIES AND PRACTICES.

The difficulties experienced during the year with regard to securing replacement parts and supplies of almost every description have presented problems of serious proportions, not only are the items difficult to secure but in many instances so inferior that constant change was required. In this regard every resourse was resorted to rebuilding and improvising in order to keep equipment on the road, engine blocks and heads impossible to buy, were in many cases reclaimed by a cold welding method of chipping out the cracks and plugging with semi-steel rods assisted with the use of metallic seal.

Engine parts and crankshafts, harmonic balances, gears, brake drums and a multiplicity of other items were restored to original measurements by banding, metallizing and machining and returned to service. Spindles and axles were turned in the Machine Shop from axle steel to make replacements likewise, many other parts impossible to purchase were also fabricated at Fernwood.

Naturally, these problems of replacement and repair were greatly multiplied by inability to secure materials and by the same token a great deal of credit is reflected upon the rank and file of the division in meeting the issue with resourcefulness and initiative.

EQUIPMENT ACQUIRED DURING 1945.

No.	Type
10	Allis Chalmers - Model B Tractors - equipped with mowers
2	Caterpillar D-6 Tractors - Equipped with Model B-6 LaPlant/Choate Hydraulic Bulldozers (Deisel Powered)
1	Black & Decker - Shorty Angle Drill- 1/4"
8	Chevrolet 1-1/2 T. Dump Trucks (These are from an order originally for 25 units - 17 to be delivered.)
15	Good Roads Model 121 Snow Plows
2	Good Roads V Type Snow Plows - Equipped with Hydraulic Wings for use upon Bulldozers.
15	Mack - Model E H X - 6 T. Dump Trucks.
4	Nelson Bucket Type Truck Loaders - Model K-5

EQUIPMENT DISPOSED OF DURING 1945.

47	Mack Trucks - Model A C - 5-1/2 T.	
2	1934 Chevrolet	Truck Chassis
4	1936 "	Dump Trucks
2	1937 "	" "
1	1937 Ford	Truck Chassis
1	1937 "	Dump Truck
15	1938 "	" "
1	Holt Tractor - 10 T.	
2	Jaeger Concrete Mixers - Model 4 L	
1	Ohio Trailer - 10-T.	
1	Power Mowing Machine (Built at Fernwood)	

EQUIPMENT PERFORMANCE & COST GRAPH.

Cars - - Per Mile Costs - - Gas & Oil Performance.

Type	Gas	Oil	Tires Tubes	Parts	Repair Labor	Depre- ciation	Total	Miles per Gal. Gas.	Miles per Qt. Oil	
1939 Buick	$.0098	$.0009	$.0042	$.0117	$.0195	$	$.0461	13.5	118	
1940 "	.0113	.0110	.0020	.0055	.0440		.0638	10.8	122	
1941 "	.0080	.0007	.0041	.0052	.0300	.0455	.0941	12.8	124	
1942 "	.0082	.0005	.0028	.0030	.0270	.0409	.0824	12.9	169	
1937 Chevrolet	.0112	.0009	.0074	.0191	.0481		.0867	8.5	96	
1938 "	.0082	.0007	.0024	.0042	.0100		.0255	14.3	167	
1939 "	.0071	.0004	.0055	.0043	.0110		.0283	14.4	199	
1940 "	.0076	.0005	.0030	.0035	.0083	.0009	.0283	14.7	203	
1941 "	.0075	.0005	.0032	.0037	.0107	.0096	.0352	14.8	198	
1942 "	.0071	.0004	.0028	.0027	.0085	.0098	.0313	15.7	232	
1940 Ford	.0069	.0005	.0035	.0057	.0103		.0269	15.1	184	
TRUCKS - 1-1/2 TON										Cost Per Hour
1936 Chevrolet	.0136	.0007	.0017	.0089	.0239		.0488	8.6	171	.25
1938 "	.0134	.0015	.0047	.0074	.0143		.0422	8.8	103	.27
1940 "	.0118	.0008	.0049	.0071	.0142		.0388	9.5	148	.28
1941 "	.0152	.0017	.0046	.0071	.0152	.0089	.0527	8.4	85	.34
1942 "	.0138	.0009	.0032	.0043	.0094	.0141	.0457	8.9	136	.29
1945 "	.0138	.0006		.0207	.0393		.0744	7.9	170	.41
1937 Ford	.0162	.0011	.0066	.0112	.0363		.0714	6.2	82	.34
1938 "	.0163	.0020	.0048	.0084	.0161		.0476	7.6	76	.28
1940 "	.0182	.0018	.0041	.0110	.0173		.0524	7.	86	.31
1945 Mack-- 2-1/2 T.	.0195	.0009	.0028	.0082	.0156	.0691	.1161	6.2	141	.97
1938 " 4-T	.0234	.0018	.0139	.0223	.0543		.1148	5.	62	1.15
1938 " 5-1/4 T.	.0427	.0025		.0152	.0540		.1144	2.8	42	.79
1945 " 6-T	.0393	.0007		.1266	.0502	.1103	.3271	3.2	300	2.87
Mack Cable Truck	.0164	.0007		.0092	.0276		.0539	5.6	106	4.83

(Continued)

EQUIPMENT PERFORMANCE & COST GRAPH. (Continued)

Cars - - Per Mile Costs - - Gas & Oil Performance.

Type	Gas	Oil	Tires Tubes	Parts	Repair Parts	Depre-ciation	Total	Miles per Gal. Gas.	Miles per Qt.Oil	Cost per Hour.
*Mack Lorain Crane	$.3325	$.0210	$.0007	$.1720	$.1267	$.2718	$.9247	4.	9	1.15
Mack HX Tractor	.0315	.0011		.0074	.0327	.1254	.1981	3.	74	2.42
Walters(Snow Fifhter)	.1193	.0107	.0029	.1615				1.1	12	2.13
* This item reflects cost of all operations					.1364	1.3451	1.7759			

MISCELLANEOUS EQUIPMENT - PER HOUR & PERFORMANCE DATA

Type	Gas	Oil	Tires Tubes	Parts	Repair Laborr	Depre-ciation	Total
Graders							
Austin/ Case	$.1812	.0111	$	$.0742	$.0974	$	$.3639
Rome/ Galion	.1723	.0128	.0197	.1572	.1752		.5372
Galion/ Case	.1619	.134	.0238	.0971	.0910	.2714	.6586
Holt Tractor	.7285	.0412		1.2194	.6733		2.6624
Bulldozer	.0182	.0544		.0849	.0978	1.0447	1.30
Mudjack	.1011	.0059	.0049	.2647	.3901		.7667
Concrete Mixer	.0438	.0028		.1040	.5332	.9861	1.6699
Cold Patch Mixer	.0332	.0019		.0521	.0849	.2507	.4228
Air Compressor	.1805	.0119		.0552	.0783	.3378	.6637
Water Wagon				7.05	15.11		22.16
Worthington Mower	.0727	.0082	.0196	.2263	.2323	.0833	.6424
International Mower	.0284	.0010	.0165	.0516	.0504	.1432	.2911
Allis Chalmers Mower	.0629	.0120	.0032	.0501	.1421	.1877	.4580
Power Lawn Mower	.0193	.0054	.0028	.0879	.0700	.0370	.2224
Rollers - 5-T	.1801	.0073		.1068	.6394	1.6601	2.5957
Rollers - 10-T	.2467	.0184	.0024	.0774	.3369	.2506	.9324
Curecrete Spray	.0210	.0025		.1647	.5560	.3619	1.1061

AUDITING & ACCOUNTING BUREAU
April 25th 1946.

"For Sale of Gas, Oil, Parts, Material & Supplies, Tires, Tubes & Misc."
YEAR 1945.

DATE	NAME	DESCRIPTION	AMOUNT
January	Kingston Trap Rock Company	Parts	$ 10.69
January	Newburg Transfer Inc.	Material & Supplies	1.98
January	N.J. Civil Service Commission	Gas	20.32
January	N.J. State Dept. of Labor	Gas, Oil & Parts	3.40
January	Secretary of State's Office	Gas, Oil Material & Supplies	8.03
February	N.J. Civil Service Commission	Gas	6.52
February	Secretary of State's Office	Gas, Oil & Parts	11.83
February	Carlton Smith	Parts	1.31
February	N.J. Civil Service Commission	Gas & Oil	1.61
February	N.J. State Board of Beauty Culture	Parts	3.11
February	Township of Oxford	Parts, Material & Supplies	3.88
February	N.J. State Police	Misc.	2.00
February	John Kramer	Parts, Material & Supplies	.52
February	John Williams	Parts, Material & Supplies	68.68
March	Toledo Bros & Co.	Material, Supplies, Parts, Tires & Tubes	260.75
March	N.J. Civil Service Commission	Gas	25.37
March	Secretary of State's Office	Gas	9.35
March	Johns Manville Corp.	Material & Supplies	.23
March	N.J. Civil Service Commission	Gas, Oil, Parts, Material & Supplies	63.83
March	N.J. Sanitarium Glen Gardner	Parts, Material & Supplies	.66
April	McCotter Trucking Co.	Parts, Material & Supplies	216.61
April	Howard Sober, Inc.	Parts, Material & Supplies	4.29
April	N.J. Civil Service Commission	Gas	5.91
May	N.J. Civil Service Commission	Gas	7.78
May	Secretary of State's Office	Gas	4.68
June	N.J. Civil Service Commission	Gas	15.67
June	Secretary of State's Office	Gas & Oil	7.12
July	Secretary of State's Office	Gas	7.41
July	Belmont Novelty Co.	Parts, Material & Supplies	9.98
July	Henry H. Most	Parts, Material & Supplies	81.59
July	N.J. State Dept. of Labor	Gas, Oil, Parts, Material &Sup.	8.13
July	N.J. State Motor Vehicle Dept.	Parts, Material& Supplies	98.80
July	N.J. State Purchasing Dept.	Material & Supplies	.58
August	N.J. Civil Service Commission	Gas & Oil	18.74
August	Brooks Transportation Co.	Parts, Tire Tubes Materil & Supplies	62.37
September	Alice Aaroe	Misc.	1.50
September	N.J. Civil Service Commission	Material & Supplies	.38
September	N.J. Civil Service Commission	Gas	8.28
September	Secretary of State's Office	Gas & Oil	7.41
October	N.J. Civil Service Commission	Gas	12.97
October	Jack Train	Parts	.59
October	N.J. State Dept. Tax & Finance	Parts	5.17
October	N.J. State Purchasing Dept.	Water Service	35.43
November	N.J. Civil Service Commission	Gas	10.48
November	N.J. State Dept. of Labor	Gas, Oil & Parts	2.50
November	Patrick F. Ivers	Misc.	3.00
November	N. J. Civil Service Commission	Gas, Parts, Material & Sup.	59.20
			$1,200.64

AUDITING & ACCOUNTING BUREAU
April 25th 1946.

SALE OF SCRAP MATERIAL FROM FERNWOOD SERVICE STATION

YEAR 1945.

Date	Name	Description	Amount
March	Samuel Hyman	Scrap Tires	$ 400.00
March	Max's Auto Parts Co.	Scrap Tire & Tubes	137.20
July	Harvey Cohen	Scrap Iron & Metal	195.26
July	Earl Livitin	Scrap Tires	369.00
October	Max's Auto Parts Co.	Scrap Tires & Tubes	311.05
			$1,412.51

AUDITING & ACCOUNTING BUREAU
April 25th 1946

RENTAL FROM EVERETT'S ALLEY GARAGE

DATE	NAME	DESCRIPTION	AMOUNT
		NONE	

AUDITING & ACCOUNTING BUREAU

April 25th 1945.

RENTAL OF DEPARTMENT CARS

YEAR 1945.

Date	Name	Description	Amount
January	N.J.State Dept. LocalGovernment	Rental	$ 4.00
February	N.J. State Dept. Local Government	Rental	88.00
February	N.J. State Post War Economic Com.	Rental	41.40
March	N.J. State Dept. Local Government	Rental	80.00
April	N.J. State Dept. Local Government	Rental	84.00
April	N.J. State Post War Economic Com.	Rental	16.46
May	N.J. State Civil Service Com.	Rental	9.03
May	N.J. State Dept. Local Government	Rental	84.00
May	County of Sussex	Rental	12.42
June	N.J. Civil Service Commission	Rental	26.83
June	N.J. State Dept. Local Government	Rental	84.00
July	N.J. State Civil Service Com.	Rental	33.11
July	N.J. State Dept. Local Government	Rental	160.00
September	N.J. State Alcoholic Bev. Control	Rental	2.66
September	N.J. State Dept. Local Government	Rental	276.00
September	Secretary of State's Office	Rental	71.57
November	N.J. Civil Service Commission	Rental	104.00
November	Attorney General's Office	Rental	265.60
November	County of Sussex	Rental	13.68
			$1,456.76

AUDITING & ACCOUNTING BUREAU

April 25th 1946.

RENTAL OF DEPARTMENT TRUCKS AND ROAD MACHINERY

YEAR 1945.

Date	Name	Description	Amount
February	N. J. State Police	Rental	.25
February	N. J. State Police	Rental	21.97
March	N. J. State Dept. of Health	Rental	11.20
March	Toledo Brothers & Co.	Rental	80.28
April	Mc Cotter Trucking Co.	Rental	2.50
April	N. J. State Dept. of Health	Rental	11.20
April	Mc Cotter Trucking Co.	Rental	14.85
May	N. J. State Dept. of Health	Rental	14.00
May	Secretary of State's Office	Rental	148.72
May	Secretary of State's Office	Rental	87.12
June	N. J. State Defence Council	Rental	37.07
June	N. J. State Defence Council	Rental	79.47
July	N. J. Civilian Defence Council	Rental	13.52
July	Henry H.Most	Rental	3.16
July	N. J. Civilian Defence Council	Rental	7.92
August	Brooks Transportation Co.	Rental	6.13
September	N. J. Civil Service Commission	Rental	3.28
September	N.J. State Dept. Health	Rental	36.40
September	N. J. State Alocholic Beverage Control	Rental	1.80
September	N. J. State Alocholic Beverage Control	Rental	1.10
November	N. J. State Dept. Taxarion & Finance	Rental	68.52
November	N. J. State Dept. of Health	Rental	11.20
November	N. J. Dept. of Institutions & Agencies	Rental	57.00
			$718.66

AUDITING & ACCOUNTING BUREAU

April 25th 1946.

FERNWOOD OVERHEAD LABOR

YEAR 1945.

Date	Name	Description	Amount
January	N.J. State Dept. of Labor	Labor	$ 1.46
January	Kingston Trap Rock Co.	Labor	.34
January	Newburg Transfer Inc.	Labor	1.18
February	N. J. State Board of Beauty Culture	Labor	.24
February	N.J. State Purchasing Dept.	Labor	5.66
February	John Kramer	Labor	.74
February	Carlton Smith	Labor	1.26
February	John Williams	Labor	3.89
March	N.J.State Civil Service Commission	Labor	14.64
March	Johns Manville Corporation	Labor	.66
March	Toledo Brothers & Co.,	Labor	43.80
April	McCotter Trucking Co.	Labor	18.29
April	Howard Sober Inc.	Labor	3.20
July	N. J. State Dept.of Labor	Labor	2.50
July	N. J. State Motor Vehicle Dept.	Labor	4.40
July	N. J. State Purchasing Dept.	Labor	.74
July	N. J. State Purchasing Dept.	Labor	.78
July	Belmont Novelty Co.	Labor	1.06
July	Henry H. Most	Labor	28.77
August	Blue Line Transportation Co.	Labor	2.10
August	Brooks Transportation Co.	Labor	11.71
August	Louis L. Sunshine	Labor	1.11
September	N. J. Civil Service Commission	Labor	5.55
October	Jack Train	Labor	.62
November	N. H. Civil Service Commission	Labor	12.33
Nowember	N. J. Civil Service Commission	Labor	1.06
November	N. J. State Motor Vehicle Dept.	Labor	1.98
November	N. J.State Dept. of Labor	Labor	.62
			$ 170.69

AUDITING & ACCOUNTING BUREAU
April 25th 1946.

REPAIR LABOR TO NEW JERSEY STATE DEPARTMENTS

DATE	NAME	DESCRIPTION	AMOUNT
January	N. J. State Dept. of Labor	Repair Labor	$ 14.62
February	N. J.State Board Beauty Culture	Repair Labor	2.42
February	N. J. State Police	Repair Labor	12.87
February	N. J. State Purchasing Dept.	Repair Labor	56.62
March	N. J. State Civil Service Com.	Repair Labor	146.36
July	N. J. State Dept. of Labor	Repair Labor	24.96
July	N. J. State Motor Vehicle	Repair Labor	44.03
July	N. J. State Purchasing Dept.	Repair Labor	7.35
July	N. J. State Purchasing Dept.	Repair Labor	7.75
Sept.	N.J. Civil Service Com.	Repair Labor	35.70
Nov.	N. J. Civil Service Com.	Repair Labor	6.25
Nov.	N. J. State Dept. of Labor	Repair Labor	19.78
Nov.	N. J. State CivilService Com.	Repair Labor	123.27
Nov.	N. J. State Civil Service Com.	Repair Labor	10.62
Nov.	N. J. State Civil Service Com.	Repair Labor	6.20
			$518.80

AUDITING & ACCOUNTING BUREAU
April 25th 1946.

REPAIR LABOR TO DEPARTMENT EQUIPMENT DAMAGED BY OUTSIDE PARTIES.

YEAR 1945

Date	Name	Description	Amount
January	Kingston Trap Rock Company	Repair Labor	$ 3.42
January	Newburg Transfer Inc.	Repair Labor	11.79
February	Carlton Smith	Repair Labor	12.60
February	John Kramer	Repair Labor	7.35
February	John Williams	Repair Labor	38.93
March	Toledo Brothers & Co.	Repair Labor	274.33
March	Johns Manville Corp.	Repair Labor	6.57
April	Mc Cotter Trucking Company	Repair Labor	152.13
April	Howard Sober Inc.	Repair Labor	32.03
July	Belmont Novelty Company	Repair Labor	10.56
July	Henry H. Most	Repair Labor	271.13
August	Louis L. Sunshine	Repair Labor	11.11
August	Blue Line Transportation Co.	Repair Labor	20.97
August	Brooks Transporation Co.	Repair Labor	84.15
October	Jack Train	Repair Labor	6.16
			$943.23

NEW JERSEY STATE HIGHWAY DEPARTMENT

List of Equipment

Cars	No. & Make	Year & Body Type	Quantity
	22 Buick	1938 Coupe	1
		1939 Sedans	2
		1940 "	5
		1941 "	5
		1942 "	9
	290 Chevrolet	1937 1/2 T Pickups	5
		1938 " " "	9
		1939 Station Wagons	11
		1940 Sedans	7
		1940 Coaches	13
		1940 Coupes	30
		1940 Station Wagons	11
		1940 1/2 T.Pickups	13
		1941 Sedans	5
		1941 Coaches	19
		1941 Coupes	17
		1941 Station Wagons	24
		1941 1/2 T.Pickups **	19
		1941 3/4 T. Pickups **	3
		1941 3/4 T. Special Ladder	1
		1942 Sedans	6
		1942 Coaches	40
		1942 Coupes	28
		1942 Station Wagons	18
		1942 1/2 T. Pickups	9
		1942 3/4 T. Pickups	1
		1942 3/4 T.Special Ladder	1
	13 Fords	1940 1/2 T. Pickups	10
		1940 1/2 T. Screen Body	3
		Total	325
Trucks			
	143 Chevrolet (1-1/2 T.)	1936 Compressors	2
		1936 Screen Body	1
		1936 Stake, Welding Outfit	1
		1936 Dumps	1
		1937 Screen Body	2
		1937 Water Wagon	2
		1937 Dumps	2
		1937 Wrecker	1
		1938 Screen Body	3
		1938 Dumps	52
		1938 Stake (1 Welding Outfit)	7

** One each of these pickups, equipped with ladder for Electrical Division

List of Equipment (Continued)

Trucks	No. & Make	Year & Body Type	Quantity
	Chevrolet	1940 Stake Plaint	14
		1940 Core Drills	2
		1940 Boring Outfits	2
		1940 Canopy	1
		1941 Stake	1
		1941 Dumps	10
		1942 Stake	6
		1942 Canopy	1
		1942 Dumps	24
		1945 "	6
		1946 "	2
	62 Fords (1-1/2 T.)	1937 Compressors	6
		1937 Wrechers	1
		1937 Dumps	1
		1938 Stake	6
		1938 Dumps	36
		1940 Dumps	12
	12 G M C (1-1/2 T.)	1942 Dumps	12
	132 Macks	2-1/2 T.Dumps	65
		2-1/2 T.Rack	1
		3 - T. Dump Jr.	1
		4 - T. Dumps EH	40
		4- T . Cargoes EH	4
		4 - T. Utility Body EH	1
		4 - T. Sprinklers EH	2
		10 - T. Lorain Crane AP	1
		10 - T. Lorain Crane BX	1
		15 - T. Tractor LJT	1
		6 - T. Dumps EHX	15
	1 White	7-1/2 T. Van	1
	6 F.W.D.	5 - T. Dumps with snow plows	4
		5 - T. Tractor	1
		5 - T. Rotary Snow Plow	1
	8 Walters	5-8 T. Dumps with Snow Plows	8
		Total	372
Other Equipment			
Graders		Austin	20
		Galion	36
		Rome	16
			72

List of Equipment (Continued)

Tractors	Year & Body Type	Quantity
	10 - T. Holt Caterpillar	5
	10 - T. Bulldozer Caterpillar	2
Mud Jacks		8
Mixers	Ransome Bituminous	12
	Blystone	9
	Concrete (All sizes)	19
		40
Air Compressors	16 Portable, 2 with Sand Blast	18
Miscellaneous Equipment	With License Plates	7
Water Wagons		5
Trailers		8
Allis Chalmers Mowing Machines		10
Worthington Power Mowing Machines		17
International Power Mowing Machines		1
		28
Power Lwan Mowers		55
Osborne Mowers Mounted on Ford Model T Chassis		1
Air Tools	Rock Drills 3"	1
	" " 7/8"	3
	" " 1"	35
	Paving Breakers 1-1/4"	39
	Pile Drivers	2
	Hydraugers	2
	Tampers	12
	Diggers	3
	Wood Borers	5
		102
Electric Hammer		1
Tar Kettles	Wood Burning	24
	Oil Burning	68
		92
Pumps	Power Force	19
	" Diaphragm	16
	" Centrifugal	4
	Hand Diaphragm	7
	" Force	1

List of Equipment (Continued)

		Quantity
Rollers	10 - T. Austin Gas	7
	5 - T.Galion "	2
	10 - T. "	4
		13
Lime Spreaders		6
Sand Spreaders	Butler	10
	Hvass	2
	Good Roads (Regular)	166
	" " (Model 10)	3
		187
Spray Outfits	For sign Painting	5
	" trees & shrubbery	3
	" concrete (Curecrete)	4
		12
Vibrators		7
Weigh Batchers		28
Rotary Screens		6
Loaders		8
Sweepers (Truck Drawn)		4
Power Operated Buckets		3
Plows		8
Mowing Machines Truck Drawn	McCormick-Deering #6.	37
	" " #7.	11
	John Deere #1 (5')	3
	" " #2 (7')	1
	" " #2 (5')	1
	J.I. Case #5	20
	David Bradley	1
		74
Traffic Line Markers		12
Miscellaneous Equipment (No license plates)		41
Snow Plows (All Types)		575
Total Road Equipment including trucks		2,166
Shop Equipment	All Garages, etc.	396
Total No. of Pieces of Equipment of all types, December 1945.		2,562

ANNUAL REPORT

OF THE

TESTING DIVISION

NEW JERSEY STATE HIGHWAY
DEPARTMENT

FOR THE YEAR

1945

ANNUAL REPORT

OF THE

TESTING DIVISION
(LABORATORY)

NEW JERSEY STATE HIGHWAY DEPARTMENT

FOR THE YEAR

1945

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OF THE

TESTING DIVISION
(LABORATORY)

NEW JERSEY STATE HIGHWAY DEPARTMENT

FOR THE YEAR

1945

April 24, 1946.

ANNUAL REPORT - 1945

TESTING DIVISION
(LABORATORY)

General

The work performed and activities of this Division for this year have been generally the same as reported for 1944. The amount of work performed depends a great deal upon the amount of road and bridge construction done, both on the primary and secondary systems, and is indicated by the number of samples received from these various projects under construction. These samples represent materials used in actual construction, and the testing thereof is done for the purpose of qualifying these materials as to their compliance with the requirements of the specifications. In addition to this work, a portion of the samples received would represent materials used in investigation work, primarily for the purpose of developing information for the improvement of materials used in highway and bridge construction.

The ending of the war this year has greatly increased road and bridge construction over that done in the previous three or four years, particularly on our secondary highway system which includes projects constructed in the counties and various municipalities under State Aid acts. All restrictions on the use of bituminous materials by the Federal Government were rescinded. This materially helped the construction on our secondary system, because construction thereof involves the use of a considerable amount of bituminous material. The construction of roads and bridges on our primary system was somewhat curtailed, due to the restrictions placed on steel and because of the manpower shortage.

During this year there was received by this Division for test 5,258 samples, which is 40% greater than the amount received during the previous year. The various kinds of materials received are indicated under the resume given hereinbelow for each of the Sub-Divisions and Sections thereof which comprise the organization of this Division. A better understanding of the volume of work involved in the testing of this number of samples might be had if you realized the number of tests required on each of these samples. Wherever it has been possible, the number of tests required on the various materials tested by the different Sub-Divisions has been indicated.

In the 1942 Annual Report, the organization of the Testing Division and a general description in detail was given of the functions of each Sub-Division and Section. The work of each of these Sub-Divisions as given in the 1942 report has not changed sufficiently to repeat the same here.

A general outline of the routine work of each of the Sub-Divisions is given hereinbelow.

ENGINEERING SUB-DIVISION

General

This Sub-Division received and tested 2,398 samples of the kind and number as indicated in the following table:

Brick, Construction & Paving	26
Cement, Bin Test	383
" Singles	22
Concrete Block	45
" Cores	193
" Cylinders	57
Granite	6
Gravel, Road	353
" Run of Bank	4
" Washed	219
Pipe, Concrete	73
" Iron, Vitrified	15
Sand, Concrete	155
" Miscellaneous	17
Slag	14
Soil	114
Steel	56
Stone	474
Subbase	131
Miscellaneous	41

Portland Cement and Concrete Sand Testing Section

This Section tested 571 samples, which required 8,382 tests. Of the above total number of samples received, there were 433 samples of Portland, High Early, Air Entraining and White Cements. This represented 202,100 barrels, of which 7,600 barrels were rejected. There were 14,829 barrels of tested cement shipped to work in which the State Highway Department was not financially interested. In each of these cases the purchaser has been or will be billed for the quantities he received from our State approved bins. The greater portion of the cement shipped out of approved bins and not used in State Highway Department work was used by some other State agencies.

Concrete and Physical Testing Section

This Section tested 1,772 samples, which required 6,300 tests. The type and character of samples tested by this Section would be those given in the table above, with the exception of the Portland Cement and Sands.

Field Inspection Section

In addition to the above testing, all of which is done in the Laboratory, inspections are made of various types of materials, as indicated hereinbelow, at the point of production or at places where the finished product is fabricated from various types of materials.

Concrete and Clay Pipe

Representative samples were tested of these types of materials, which represented 49,057 linear feet of reinforced concrete, 1,006 linear feet of plain concrete pipe, and 20,645 linear feet of clay pipe. In addition to the tests made upon samples taken from these materials, the same were visually inspected either at the point of production or on the project.

Cast Iron Pipe

There was inspected at the point of production 305 linear feet of cast iron pipe up to October 29, 1945, on which date the authorization for the inspection of this material was turned over to Mr. R.P. Hughes. There is no reason why this Laboratory could not take care of the inspection of this commodity.

Steel

There was tested in the Laboratory and inspected at the point of fabrication 901,834 pounds of reinforcing steel for use in concrete highways and structures.

Castings

There was inspected at the point of production 504 units, totaling 564,471 pounds. Most of these castings were for use as catch basins.

Aggregates

There was inspected and approved at the point of production 2,789 tons of sand, 19,220 tons of gravel and 25,621 tons of stone for use in concrete highways and structures.

Batching Hoppers

Inspections were made as to the proper functioning of batching hoppers for determining the proportions of aggregates for use in concrete previous to the starting of the preparation of the concrete, and the weight quantities were furnished for 173 settings of this equipment for concrete roads, bridges and miscellaneous masonry.

Concrete Cores

There were 182 cores cut from pavements, which required the traveling of 3,177 miles by the core drills.

Air Entraining Cement

The use of Air Entraining Cement was permitted on Route 24, Section 22 & Route 24-N, Section 1, Fifth Street to Phillipsburg Toll Bridge Plaza, constructed by Fred Berlanti & Son for experimental purposes and research to determine whether this type of cement will produce equally as good

concrete as our Standard Portland Cement. Portions of the concrete highway were constructed using this type of cement and other portions were constructed using our Standard Portland Cement. This project will be examined from time to time to see whether there is any evidence of one type of cement being superior to the other. There are great claims made for the Air Entraining Cement, as to its increased durability over Standard Portland Cement as to its immunity to attack by salts used for deicing purposes. This was the initial job in which we used this type of cement, and every effort was made to secure as much data as possible for future reference.

Because of the fact that the amount of air entrained in the concrete seems to be the criterion as to the durability of the concrete against salt action, it was necessary to determine this, which involved making a great number of unit weights of the concrete as produced and laid to determine this factor. Unit weights were made for 31 days during the progress of this construction, and there were 42 different batches of concrete prepared at the Laboratory, using plain and air entrained cement, in connection with this project. Reports will have been made the early part of the coming year to Mr. C.F. Bedwell, Construction Engineer, regarding the data we assembled from our investigation.

In connection with the use of air entraining cement, with the thought in mind of securing all the information possible relative to this material and its uses, trips were made by representatives of this Sub-Division to five different cement companies for the purpose of discussing air entraining cement and its use in concrete, in addition to various other trips to secure information relative to test methods and equipment.

Subbase & Subgrade Material

Equipment and instructions in the use thereof were furnished the Construction Division on two different projects, for the purpose of qualifying the materials used for this purpose as to their compliance with the requirements of the specifications, and to secure information as to whether the types of material being used were suitable. These tests and other miscellaneous work required some 12 or more trips. Material was obtained to make permeability and capillarity tests on soils and sands according to recommended practices. Ten or more tests were made but furnished unexplainable and unsatisfactory results.

Material Inspectors

In the performance of the inspection work done, as explained above, the various Material Inspectors covered 99,272 miles, which is an increase of approximately 50% over the mileage traveled the previous year. This, of course, is due to the fact that there was more construction work performed during this year than the previous year.

Miscellaneous

Cooperation was extended to Mr. William Van Breemen, Special Engineer of Assignments, of the Construction Division, in the testing of some 63 experimental joints, the fabrication of which required 126 batches of concrete and 189 hours of time of one or two men, depending upon the nature of the work. Various other work in connection with his investigations required an additional 17 hours.

Calibrations were made at various times of various items of Laboratory equipment and also on a water meter for the purpose of endeavoring to determine its adaptability for use in calibrating the water used in the preparation of concrete as delivered by the concrete mixer.

Concrete beams were made and embedded in the ground in the Fernwood area for observance of salt action on concrete and the growth of these specimens when exposed to the elements.

Concrete test specimens were made for the Bituminous Section, in connection with the testing of joint fillers.

When possible, Material Inspectors investigated samples submitted by various department inspectors representing material being used during construction which failed to meet specification requirements. These consisted of sand, washed gravel and stone, as no attempt was made to check up on road gravels, etc. Of the number of investigations of this character made, 73% of the reasons for rejection of samples submitted from the field appeared to be caused by the method of sampling, 6% was due to a misunderstanding on the part of the producer relative to the type or quality of material desired, and 21% was undesirable material shipped by the producer without explanation.

Some testing was done for outside agencies. In all cases where this was done, charges were made for these services. Inspection or testing services furnished under these conditions amounted to $429.15, for which bills have been submitted and payment made.

BITUMINOUS FIELD INSPECTION SUB-DIVISION

Inspection of the Preparation of Plant Mixed Bituminous Concrete Surfaces

This Sub-Division directed the inspection at the point of production of the following quantities of bituminous concrete and sheet asphalt prepared and laid during the year 1945:

a - New Construction		
State & Federal Aid	77,669 sq. yds.	12,139 tons
State Aid	170,138 sq. yds.	18,275 tons
Not State Work	4,334 sq. yds.	1,025 tons
Total	252,141 sq. yds.	31,439 tons
b - Maintenance		
State		21,577 tons
County Repairs		30,964 tons
Not State Work		7,938 tons
Total		60,479 tons
Grand Total (New Construction & Maintenance)		91,918 tons

This grand total of tonnage is an increase of over 22,000 tons or 32.0% more than inspected during the 1944 season. The major part of this increase will be found under "New Construction, State Aid".

Inspection of Bituminous Materials at the Point of Production

During this year no inspector was located in the Philadelphia District, due to the fact that we had no man available for this job. However, an inspector was maintained in the New York District for the purpose of inspecting bituminous materials at the point of production. From this latter district there were made shipments totaling 761,470 gallons of various types of material. This only includes shipments made by tank car and in drums. It is not possible for one inspector to be at fifteen different plants and inspect each delivery made by a distributing truck, as the volume of bituminous materials thus shipped has so greatly increased that we would have to have 24 hours of continuous service of inspection at each of the points of production from which bituminous materials are shipped, to secure information on all bituminous materials shipped. However, we do sample and test various materials in bulk at the various producers' plants, and if our tests show that the same comply with the requirements of the specifications, shipments by distributors are made from these approved lots, and information accompanying each load gives the approved lot from which it is shipped. This point is mentioned particularly because later in the report for this Sub-Division there is indicated the number of gallons used by the various counties, municipalities and State Highway Department. It will be noted that the quantity shown for that used is greatly in excess of the record of shipments made by tank car and package from the New York District only.

I would like very much to be in a position to again assign an inspector to the Philadelphia District to inspect the bituminous materials shipped therefrom.

Recording and Tabulating Bituminous Materials

This work, as described in previous annual reports, is still being handled by this Sub-Division in the same manner, and we are in a better position now to furnish the information required immediately because of assigning a clerk to assist in this work.

[illegible]

[illegible] is an increase of over 92,900 tons of [illegible] the 1944 season. The major part of this increase is in [illegible] New Construction, State Aid".

Inspection of [illegible] Bituminous Materials

[illegible] that we had no [illegible] available for this job. However, an inspector was [illegible] in the New York District for the purpose of inspecting bituminous materials at the points of production. From this latter district there were [illegible] shipments totaling 761,[illegible] types of materials. This only includes shipments made by tank car and in drums. It is not possible for our inspectors to visit these different plants and inspect each delivery made by distributor truck, as the volume of bituminous material thus shipped has greatly increased and that we would have to have 24 hours of continuous service of inspection at each of the points of production from which bituminous materials are shipped, to secure information on all bituminous material shipped. However, [illegible] and that [illegible] material is tested at the various producers' plants, and if our [illegible] show that the same comply with the requirements of the specifications, [illegible] by distributors [illegible] that the quantity shown for that month is greatly in excess of the record of shipments made by tank car and drums from the New York District only.

[illegible] to the Philadelphia District to inspect the bituminous materials shipped therefrom.

Sampling and Testing Bituminous Materials

This work, as described in previous annual reports, [illegible] handled by this Sub-Division in the same manner, and [illegible] in a better position to furnish the information required immediately [illegible] check on [illegible] in this [illegible]

The volume of work required may better be appreciated by the fact that during this year there was used in State work of various classes, a total of 14,262,513 gallons of various types of bituminous materials. The records for this quantity of material pass through this office for calculating the number of gallons at 60°F. The quantity used this year is an increase of 3-1/3 million gallons over that used last year. This is primarily due to the fact that all Government restrictions were lifted on the use of bituminous materials, and to a great increase in the State Maintenance Oiling Program, which accounted for over two million gallons of this increase.

Field Inspection of Projects

This Sub-Division was still greatly handicapped in the making of the necessary field inspections, principally of the construction of our bituminous pavements, because of the manpower shortage. However, whenever possible, such inspections were made in addition to the following field work.

Field inspections during the laying of sheet asphalt and bituminous concrete are quite essential in order that we may have a check upon the uniformity and the formula of the mixture being used. It may be that we can be helpful to the field forces in the handling of these bituminous mixtures, particularly where the Road Inspector has had very little experience in the handling of these materials.

This Sub-Division has been relieved of one phase of its past functions, which will materially help our manpower situation; that is, in respect to calibrating the distributing trucks. This has been taken over by the State Department of Weights and Measures. This gives us the protection that any calibrated record of a truck will now be official.

BITUMINOUS TESTING SUB-DIVISION

There was received and tested by this Sub-Division 2,728 samples of the various kinds of materials listed in the table given hereinbelow, which represent approximately 11,000 separate tests.

Asphalt Cement	338
Asphalt Emulsion	9
Asphaltic Oil	664
Benzol	3
Bituminous Concrete Type A, Top Course	251
" " " A, Bottom Course	34
" " " A, Repair Course	1
" " " CA-BC-1	1
" " " CA-BC-2, Top Course	26
" " " CA-BC-2, Bottom Course ..	1
" " " FA-BC-1	157
" " " FA-BC-2, Top Course	43
" " " FA-BC-2, Bottom Course ..	17
" " " S.P.	3
" " " T, Top Course	26
" " " T, Bottom Course	2

Bituminous Sand	43
Bituminous Treated Gravel	2
Coal Tar Enamel	1
Coal Tar Primer	1
Cold Patch	4
Concrete Curing Compound	3
Cover Sand	33
Drier	2
Fuel Oil	9
Kerosene	1
Liquefier	55
Liquid Joint Filler	22
Lubricating Oil	5
Mineral Filler	58
Motor Fuel	14
Premoulded Expansion Joint	8
Resin	5
Sheet Asphalt, Top Course	198
" " Bottom Course	124
Stone Sand	84
Tar	471
Tar Paint	5
Turpentine	2
Waterproofing Asphalt	1
Waterproofing Fabric	1

This Sub-Division has not been able to do much more than test the samples indicated above, due to the shortage of manpower. They have, however, attempted to do some experimental work, principally in the determination of a method to qualify the use of bituminous materials and additives to prevent stripping of bitumen therefrom.

CHEMICAL SUB-DIVISION

There was received and tested by this Sub-Division a total of 229 samples of the kinds of material listed hereinbelow, which required the making of approximately 1,500 tests.

Aggregate, Bituminous	10
Benzol Forerunnings	1
Calcium Chloride	3
Cinders	3
Curing Compound	4
Grit	2
Lignin Binder	9
Lime	3
Linseed Oil	2
Lubricating Oils	5
Paint, Ready Mixed	81
Paint, Driers	2
Paint, Pigments	13
Paint, Thinners	3
Paint, Vehicle	7
Portland Cement	50

Resin	9
Sand	1
Sodium Metasilicate	1
Stone	15
Top Soil	1
Turpentine	1
Water	3

There was also inspected at the point of production 25,437 gallons of White Traffic Paint, 4,037 gallons of White Lead Paint, 175 gallons of Special Guard Rail Paint and 1,508 gallons of Graphite Paint.

In addition to the above, this Sub-Division was quite active during this year in observing traffic paints applied on Route 29 near Mountainside in connection with research being conducted by the Highway Research Board and the American Society for Testing Materials. These road tests are conducted to determine the most suitable formula for the manufacture of a durable traffic paint and also to secure information for the development of methods of test for determining certain qualities of traffic paint.

Considerable work has been and is still being carried on in connection with the fineness of Portland Cement by a method known as the Blaine Air Permeability Test, for the purpose of securing information to see whether we can adapt it in place of our present Wagner Turbidimeter Method which is quite cumbersome.

RESEARCH AND INVESTIGATIONS

Investigations of certain materials and processes have been attempted by this Division under very restricted conditions because of manpower shortage. Also, we have still attempted to keep in close contact with the various Government agencies, producers, and regional and national associations, primarily for the purpose of keeping in touch with the developments of the agencies in respect to the betterment of materials for our types of construction. All of this information is of great assistance to us, but it does take a great deal of my time to keep in contact with these activities.

The following is a brief outline of some of the investigations and research problems carried out by this Division this year, and those investigations started previous to this year which have either been concluded or are still being worked upon.

Investigation 41-1. Guard Rail Paint. White Lead vs. Titanium Magnesium Paint.

No mention has been made in previous reports of this investigation, but it was carried out for the purpose of trying to find a white paint for painting guard rail posts, particularly in the Metropolitan District, which would not darken upon exposure. White lead has been used for this purpose but because of the fumes and atmospheric conditions in and around the Metropolitan Area, the white lead darkened very quickly after being applied. A new type of white paint was applied, in which there was absolutely no lead, and to date it has proven that it will withstand the conditions in the Metropolitan

[illegible]

[illegible] this Sub-division has [illegible] tests of materials. These [illegible] the most suitable formula for the [illegible] paint and also to procure information for the development of [illegible] for determining certain qualities of [illegible] paint.

[illegible] which has been and is still being carried on in connection with the [illegible] of Portland Cement by [illegible] Lost, for the purpose of securing information [illegible] it in place of our present Wagner Turbidimeter [illegible]

[illegible]

Investigations of certain materials and procedures [illegible] Division [illegible] also, we have still attempted to keep in close contact with the various Government agencies, producers, and technical associations, primarily for the purpose of keeping in touch with the [illegible] in respect to the betterment of materials for our types of construction. [illegible] takes a great deal of my time [illegible] in contact with [illegible].

The following is a brief outline of some of the investigations and research problems carried out by this Division this year, [illegible] still being worked up.

Investigation [illegible]-1. [illegible]

No mention has been made in previous reports of this investigation, as it was carried out for the purpose of [illegible]

Area as to non-fading, and shows promise of equal durability in comparison with the white lead. The final examination of this paint will be made the early part of the coming year, and a recommendation made as to its use in place of the white lead for painting guard rail posts.

Investigation 44-1. Committee C-1 on Portland Cement.

This investigation was carried on by us as one of the cooperators with Committee C-1 on Portland Cement of the American Society for Testing Materials, and the results of our tests have been submitted to the appropriate committee and concludes the work required of us as a cooperator. More details of this work were given in the 1944 report regarding this investigation.

Investigation 44-2. Portland Cement and Mortar Expansion.

Details of the work involved in this investigation, primarily for Mr. William Van Breemen, Special Engineer of Assignments, of the Construction Division, are given in the 1944 report. The tests are still being conducted and the results of our tests are available at any time for the information of those concerned. Mr. Van Breemen has been notified of the results secured.

Investigation 44-3. Method of Test for Cement Content of Hardened Portland Cement Concrete.

This investigation was reported in detail in our 1944 report, and is still being continued. As the work performed to date shows that there are some errors in the American Society for Testing Materials method for preparing this determination, further work is being done in an attempt to clarify the points in question.

Investigation 44-5. Guard Rail Post Deterioration, Suggestion 156.

Because of the material shortage and the expansion of the work involved in this investigation, nothing was done this year with the investigation, with the exception of making preparations for carrying it forward to some definite conclusion. The status at the present time is the selection of the post to be installed. The grounds at Fernwood were selected as the site. The post will be installed sometime in April or May of this coming year.

Investigation 44-6. Soil for Mud-Jack Aggregate.

We have not been able to do much more of any importance in connection with this problem, but what has been developed in the matter of the adding of calcium chloride to the mixture of soil and portland cement, I believe has greatly improved the sludge used for mud-jacks.

Investigation 44-7. Shoulder Stabilization.

Apparently this investigation has been abandoned, as the Laboratory has not been asked to cooperate or furnish any information in connection therewith.

Investigation 45-1. Bituminous Materials, Surface Treatment.

This Division is acting in the capacity of advisors and furnishing information as to the character and type of materials that will be used in a surface treatment experiment to be carried out by Mr. A.W. Muir, Superintendent of Maintenance, during the season of 1946. The experiment involves the application as a surface treatment of such types of bituminous materials as indicated hereinbelow, which we hope may prove to be an improvement over the type of materials that are now being used for surface treatment.

The materials under consideration are heavy asphalt emulsion, asphalt cement having a penetration of 200-300, asphaltic oil Grades RC-2 and RC-3, and tar Grade RT-8. Primarily the reasons for conducting this investigation are as follows:

1. The asphaltic oils Grades RC-2 and RC-3 have not proven very satisfactory for surface treatment on our primary system because they do not dry fast enough to hold the aggregate under the large volume of traffic going over these highways.

2. To find some asphaltic material that might prove successful, and which can be placed in competition with tar Grade RT-8 which has proven satisfactory for this purpose.

3. The asphalt cement with a penetration of 200-300 was selected for the reason that I have been informed that in several states, particularly Pennsylvania and Virginia, that they have secured very good results with the use of this material for surface treatment.

4. A heavy asphalt emulsion was also included because of reports received from other states regarding the good results that they have secured with this material, and it would also add another asphaltic material of a different nature from the asphalt cement with a penetration of 200-300 or a tar Grade RT-8, which we feel would create greater competition.

Investigation 45-2. Bituminous Mixtures using Aluminum Sulphate and Quicklime, to Prevent Stripping of Bitumen from Aggregates.

This investigation was prompted first to endeavor to secure better adhesion to damp aggregates for maintenance work. In the spring, the aggregates that might be used for maintenance work may be quite damp, due to the lack of facilities for keeping them from being exposed to the weather and also it may not always be possible to set up proper equipment and methods to dry such stone. The State of Connecticut stated that they have used aluminum sulphate and quicklime for this purpose, and it has proven quite satisfactory. We tried several mixes, using different methods, for determining its ability to prevent stripping of the bitumen from the aggregates, but we did not find that the use of these materials would prevent such stripping. Therefore, we conclude the use of these materials would be a failure, in regard to the prevention of stripping of the bitumen from the aggregates.

Investigation 45-3. Analysis of Type T Mixtures to Accurately Determine the Quantity of Tar and Moisture Content.

In analyzing mixtures of Type T Bituminous Concrete, we found some difficulty in making accurate determinations of the tar content because of the small amount of moisture content in these mixtures, and the free carbon content of the tar used. The work done in this investigation consisted primarily of making up various mixtures in the Laboratory of definite and known percentages of aggregates, tar and moisture content, and then analyzing the same under certain definite conditions, and checking the results against the known quantities used. Based upon this investigation, the Laboratory has adopted a very definite method of procedure in making analyses of Type T Bituminous Concrete Mixtures, which results in a very accurate determination of the amount of tar, moisture and grading of the aggregates. Copies of the procedure used in making the analyses on the Type T Mixtures by this Division may be secured upon request.

Investigation 45-4. Joint Filler - Bituminous and Synthetic Rubber.

This investigation covers the installation of a product produced by the Thiokol Corporation of Trenton, N.J., which they felt might give us better results as a joint filler in transverse and longitudinal joints in our highways than the material we are using at the present time. Tests were conducted under the direction of Mr. W.J. Ryan, of this Division, which comprised the installation of some of this material in joint openings on Route 24, Section 22, at Phillipsburg. This experiment was not entirely satisfactory as to the results secured, because it did not adhere to the concrete any better than the material we are now using. However, valuable information was made available both to this Division and to the Thiokol Corporation for future investigation. It was the purpose of this company to continue further development of their material during the coming season.

It is hoped to lay out quite an extensive program for the investigation of this material and all other known products sold for sealing transverse and longitudinal construction joints and dummy joints, for the purpose of determining the value of all such materials. It is hoped that we may be able to make these installations on some job that is under contract during this coming season.

Investigation 45-5. Dowel Coatings.

This investigation involved cooperative work with Mr. William Van Breemen, of the Construction Division. The tests were made on various materials, as suggested by Mr. Van Breemen, by our Bituminous Testing Sub-Division, and the details of these tests, results secured, and the conclusions arrived at were given to Mr. Van Breemen, although we have all the detailed data as to just exactly what was done, if it is desired to refer to it in the future. Mr. Sigafoos has made a detailed report on this matter, which is reported in his annual report to me.

Investigation 45-6. Bituminous Materials - Prevention of Stripping of Bitumen from Aggregates.

We are still carrying on investigations in connection with this problem and have come to no definite conclusion as to the importance or necessity of

the use of additives to bitumens for the prevention of stripping. The conditions of use are very much involved. We are being approached by certain agencies promoting the use of such a material, and I am not entirely convinced that it is necessary to add such a material to all of the bitumens that we use. It is hoped that we will be able to report some definite conclusions in the coming year.

This problem is not only with us, but apparently is nation-wide, as indicated by the activities of such agencies as the American Society for Testing Materials, American Association of State Highway Officials, and several states. There is evidently a need for bitumens to which additives have been incorporated for certain uses, but I do not believe any of us know yet just what we are attempting to do.

Investigation 45-7. Comparison of "Fly Ash" and Limestone Dust for use as Mineral Fillers in Sheet Asphalt and Bituminous Concrete Mixtures.

The latter part of this year the Public Service Electric & Gas Company submitted to the Department a sample of material known as "Fly Ash", which they requested us to investigate for its possible use as a mineral filler in the preparation of Sheet Asphalt and Bituminous Concrete mixtures. This investigation was started but will not be concluded until the latter part of 1946, because of the nature of the tests required to attempt to prove its value. Basically, the investigation involves the comparison of this material with a ground limestone dust which we have used for years as a mineral filler, and which has proven very satisfactory.

This investigation involves the preparation of mixtures of sand and each of these mineral fillers, and a given asphalt cement, extracting the asphalt from these mixtures at given periods of 1 day, 6 months, 9 months and 1 year, and then examining the asphalt cement in each of the mixtures in which each of the different fillers was used to see if the character of the asphalt has changed.

This material, known as "Fly Ash", is dust collected by an electric process in the stacks of electric plants and is a very fine powder which is very difficult to handle when dry. It is a by-product and there has been no extensive use found for it.

Details of all of the above investigations are on file in this Division.

RESEARCH

In the 1943 and 1944 annual reports of this Division it was suggested by the writer that the Department should give very serious consideration to the possibility of arrangements with either Princeton University or Rutgers University to conduct joint highway research projects on problems concerning highway and bridge construction. I feel it is worth repeating again.

I have always felt that the Department has never done enough research and investigation of the problems confronting us in regard to the highways and bridges in this State. I think it deserves very serious consideration. A research division of some kind should be set up immediately.

I also repeat that I believe the Department should give serious consideration to the employment of a Soils Engineer. A resume of my thoughts in this matter are given in the 1944 report of this Division.

Respectfully Submitted,

Fred H Baumann

Fred H. Baumann,
Chief, Testing Division.

ANNUAL REPORT

OF THE

REAL ESTATE DIVISION

NEW JERSEY STATE HIGHWAY DEPARTMENT

FOR THE YEAR

1945

State of New Jersey
STATE HIGHWAY DEPARTMENT
SPENCER MILLER, JR., COMMISSIONER
TRENTON 1

April 22, 1946

Honorable Spencer Miller, Jr.
State Highway Commissioner
State House Annex
Trenton, New Jersey

Dear Commissioner Miller:

I respectfully submit herewith the Annual Report of the Bureau of Negotiations and Appraisals for the year 1945.

John W. Aymar

John W. Aymar
Senior Right of Way Agent

During the year 259 cases were acted on involving the acquisition of land for highway right of ways. Of this number, 226 were cases on which no previous action had been taken. These 226 new cases include:- 173 cases that were acquired by agreement, 12 cases settled by compromissary agreement after condemnation proceedings had been authorized, 2 cases on which condemnation awards were rendered, and 39 cases on which condemnation proceedings are still pending.

These figures show that 81.8% of the 226 new cases were settled by agreement, and condemnation proceedings are pending on the remaining 18.9%. It is quite likely, however, that many of them will be acquired by compromissary agreements, and that the percentage of cases settled without resorting to actual condemnation hearings will thus be increased. Of the 39 cases representing 18.9%, 13 cases or 5.7% of the 226 new cases would have had to be

acquired by condemnation in any event because of involved titles or inability to locate owner, so only 26 cases or 11.5% of the total were authorized for condemnation because of disagreement with property owners as to price.

Of the 259 cases previously mentioned as the total acted on in 1945, 33 cases were carried over from previous years. Of these, 17 were settled by agreement without resorting to condemnation, and 16 cases were acquired either by condemnation awards or by settlements subsequent to awards.

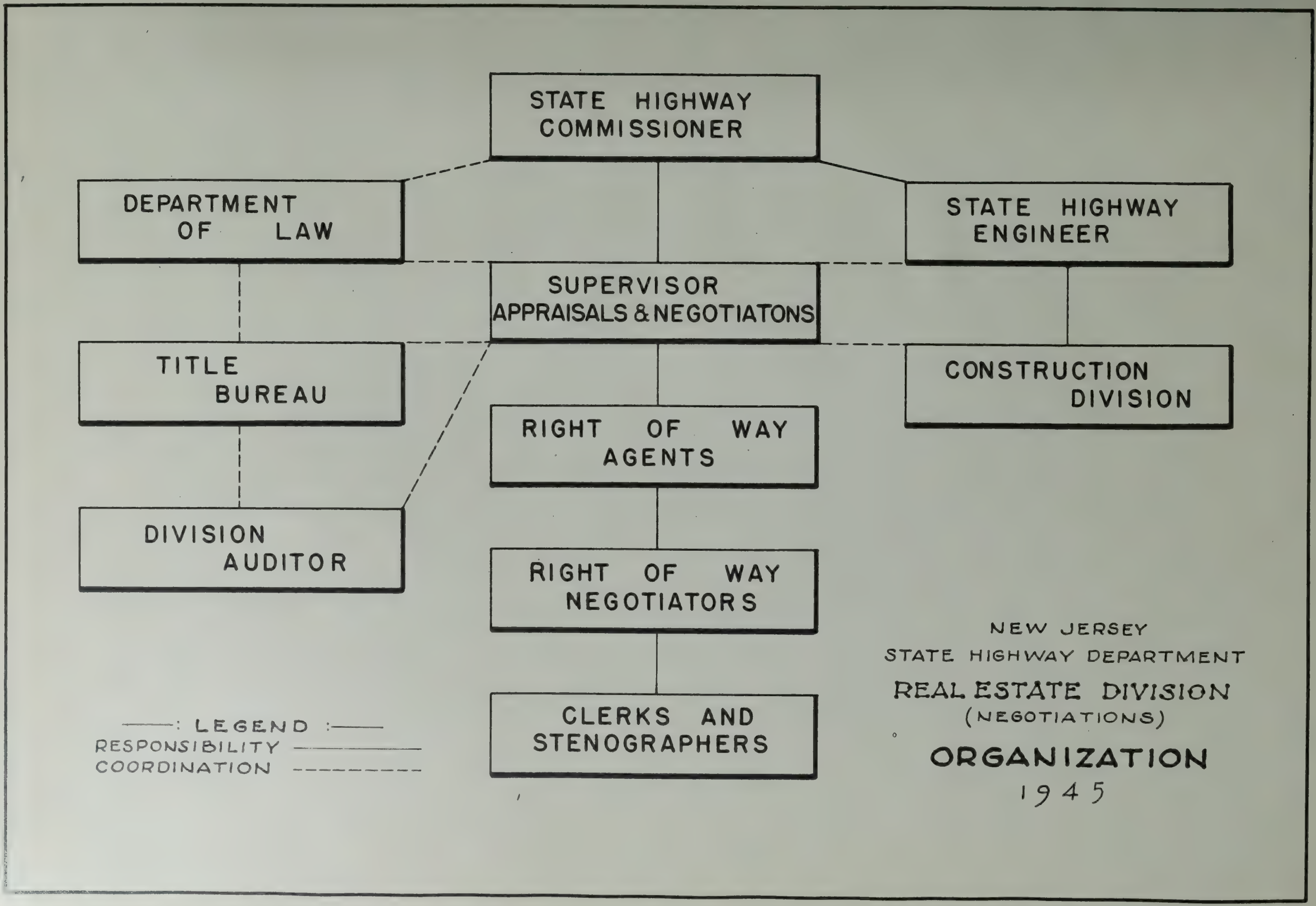
The total number of condemnation cases on which awards were made during the year was 18, 2 of which were authorized for condemnation in 1945 and 16 in previous years. Of these 18 cases only 10 were condemned because of disagreement as to price; the remaining 8 being condemned because of involved titles or our inability to locate owners.

The lands acquired during the year are for right of way on 132 sections of highways throughout the State and include properties located in 20 of the 21 counties. The volume of new work was small as was to be expected under existing conditions. We took advantage of the opportunity thus afforded to dispose of a number of somewhat involved cases of minor importance that had been pending for several years.

PERSONNEL OF BUREAU OF APPRAISALS AND NEGOTIATIONS

JANUARY 1, 1945 to DECEMBER 31, 1945

Aymar, J. W.	Supervisor-Appraisals & Negotiations
Kramer, H. N.	Right of Way Agent
Lincoln, A. C.	Right of Way Agent
Stewart, T. W.	Right of Way Agent
Walklet, J. J.	Right of Way Agent
Dawes, M.	Right of Way Negotiator
Hancock, W. R.	Right of Way Negotiator
Ireton, F. A.	Right of Way Negotiator
Sherman, R.	(Acting) Right of Way Negotiator 8-1-45
Whitehead, J. A.	(Acting) Right of Way Negotiator 10-1-45
Balbresky, M.	Administrative Assistant III
Beilinson, H.	Principal Clerk
Manion, A. M.	Senior Clerk Stenographer
O'Hara, J.	Senior Clerk Stenographer
St. John, A.	Senior Clerk Stenographer
Lefkowitz, S.	Clerk Stenographer
Cunningham, B.	Clerk Stenographer (Temporary) 10-1-45
Watt, J.	Auditor



NEW JERSEY
STATE HIGHWAY DEPARTMENT
REAL ESTATE DIVISION
(NEGOTIATIONS)

ORGANIZATION
1945

PERSONNEL OF TITLE BUREAU
JANUARY 1, 1945 to DECEMBER 31, 1945.

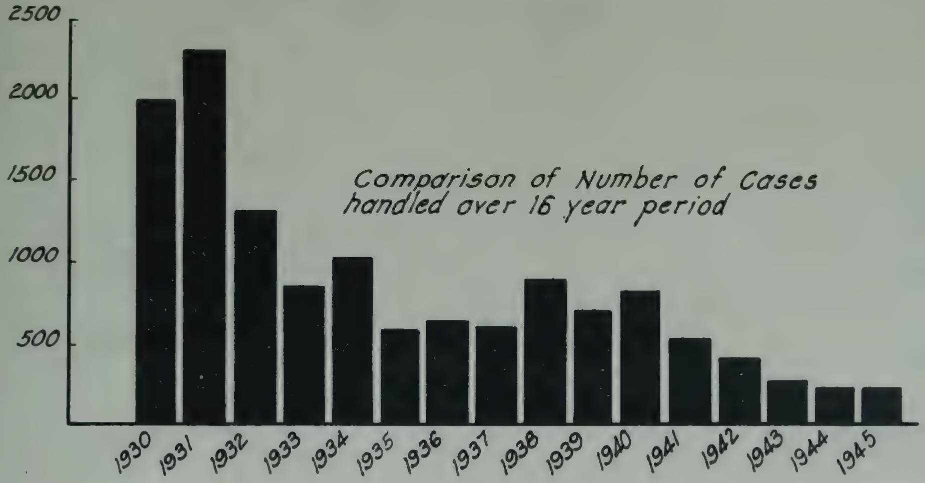
Vollmer, F.	Title Officer	
Drake, E. H.	Asst. Title Officer	
Brown, J. G.	Title Examiner	
Esposito, A.	" "	Ret. from M. L. 8-1-45
Johnson, M. R.	" "	
Kirk, W., Jr.	" "	
Prout, J. L.	" "	
Rebbeck, V. J.	" "	
Rogers, W. L.	" "	
Schanck, W. K.	" "	Ret. from M. L. 10-1-45
Sams, V. B.	" "	
Seale, L. F.	" "	Ret. from M. L. 10-1-45 Resigned 11-30-45
Seggel, O. F.	" "	
Silverstein, H. C.	" "	
Skillman, F. O.	" "	
Ward, B. A.	" "	
Adler, L.	Title Searcher	
Cohen, M. E.	" "	
Denmead, H. W.	" "	
Hulit, F. V.	" "	
Layton, F. S.	" "	
Masterton, W. W.	" "	
McCrosson, M.	" "	Ret. from M. L. 12-1-45
Ruderman, B.	" "	
Schatzman, F.	" "	
Schiller, W. H.	" "	
Swackhamer, M. D.	" "	
Ward, M. G.	" "	
Ward, P.	" "	
Weisman, H.	" "	
Lister, N.	Principal Clerk	Ret.from M.L.7-9-45
Naples, L. S.	Senior Clerk Stenographer	
Brenna, F.	Clerk Stenographer	
Blinn, D. S.	Clerk Typist	
Laffan, J. H.	" "	
Martin, F.	" "	
MacDougall, T. V.	Asst. Highway Engineer	

EMPLOYEES WORKING UNDER THE SUPERVISION OF THE DIVISION OF SURVEY & PLANS, MOST OF WHOSE SALARIES ARE TRANSFERRED TO THE BUREAU OF APPRAISALS & NEGOTIATIONS.

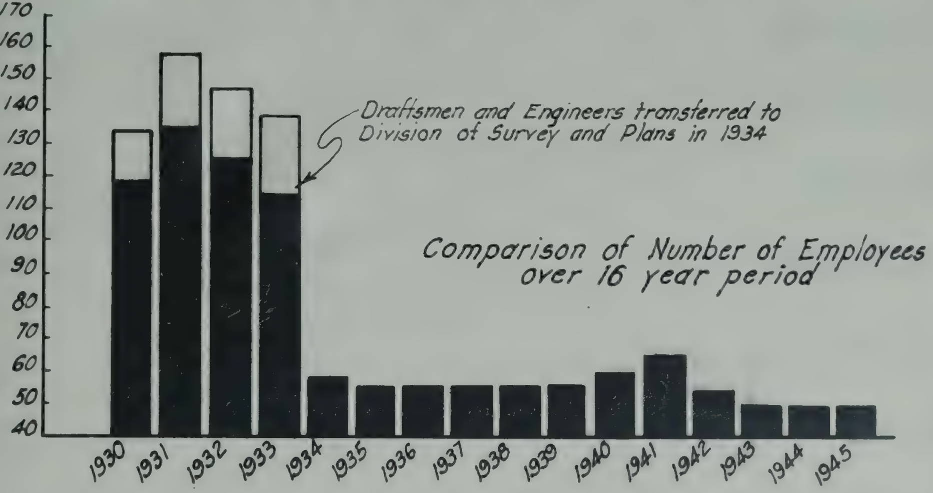
Vogel, R.	Right of Way Engineer
Cohen, A.	Senior Highway Engineer
Fowler, H.	Resident Engineer
Temperley, C.	" "
Bole, W.	Assistant Highway Engineer
Conover, G. W.	" " "
Lozier, O.	" " "
Stephan, H.	" " "
Finkle, L.	Clerk Stenographer

EMPLOYEES WHO ARE ON THE PAYROLL OF THE REAL ESTATE DIVISION ALTHOUGH THEIR WORK IS NOT DIRECTLY CONNECTED WITH ITS ACTIVITIES.

Newmark, J. J.	Special Engineer
Jakubisin, D. D.	Sr. Clerk Stenographer Emp. 11-16-45
Pollok, M.	Clerk Typist Emp.5-3-45. Res. 11-16-45
Spector, A. G.	Clerk Stenographer Resigned 11-16-45

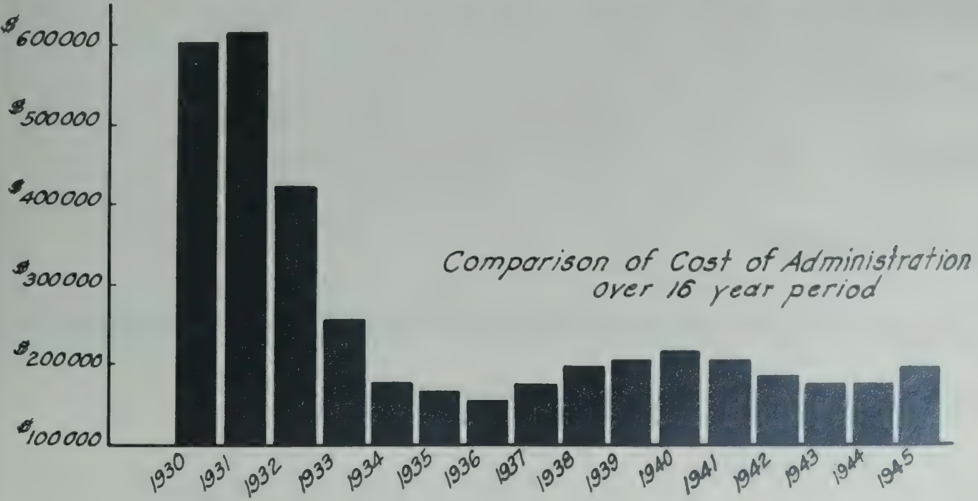


Comparison of Number of Cases handled over 16 year period

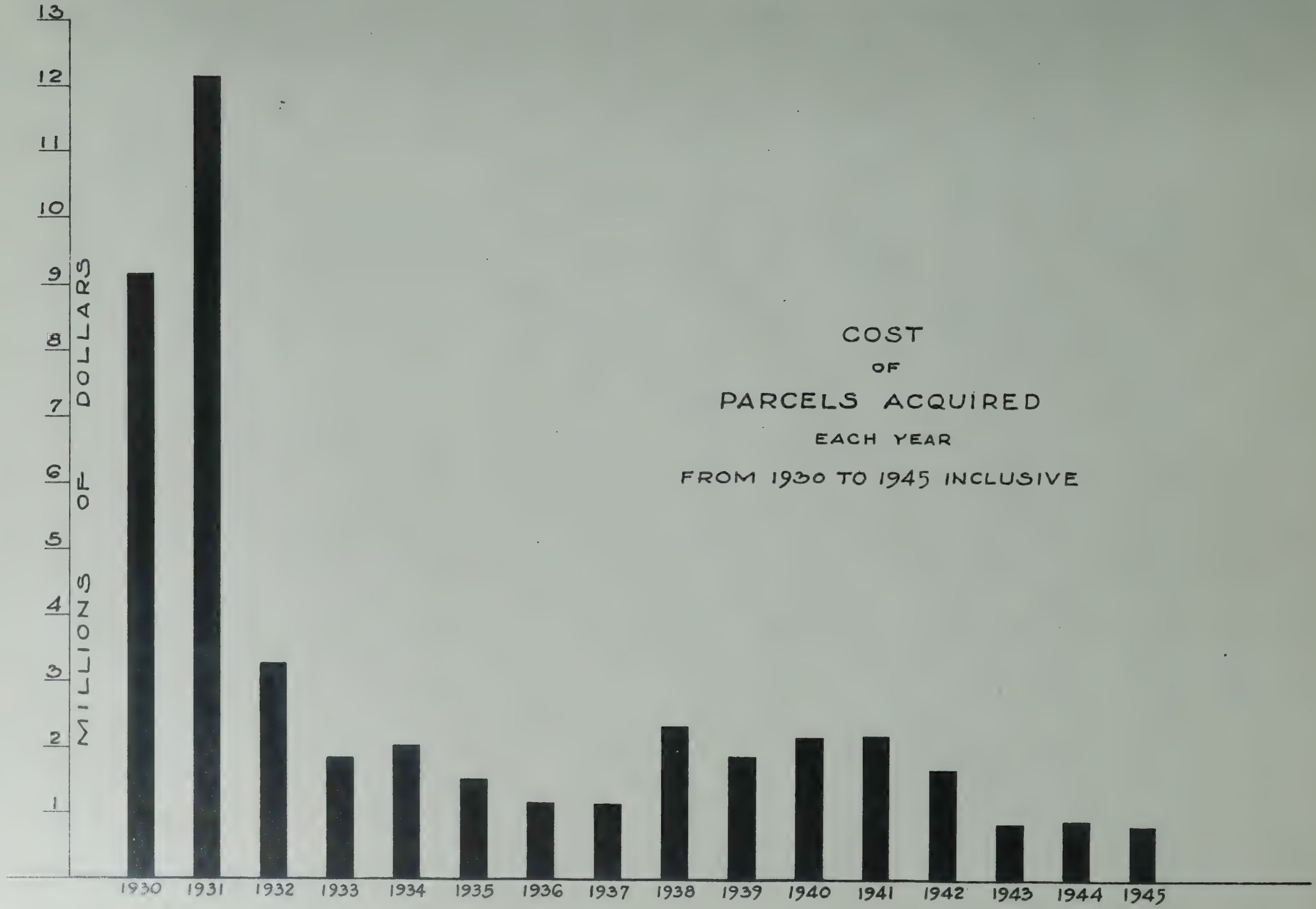


Draftsmen and Engineers transferred to Division of Survey and Plans in 1934

Comparison of Number of Employees over 16 year period



Comparison of Cost of Administration over 16 year period



COST
OF
PARCELS ACQUIRED
EACH YEAR
FROM 1930 TO 1945 INCLUSIVE

SUMMARY OF 1945 REAL ESTATE ACQUISITIONS

Figures hereon are the columnar totals shown on the last page of the following tabulation, grouped in accordance with the key diagram on the preceding page.

AGREEMENTS	No.of Par.	Amount
Original Agreements......................	173	$ 366,762.14
Compromissary Agree. 1945 authorization...	12	30,075.00
Compromissary Agree. old authorization....	17	201,738.00
Total number of agreements and amount approved during 1945...................	202	$ 598,575.14
AWARDS OR SETTLEMENTS SUBSEQUENT TO AWARDS		
Awards or settlements subsequent to awards on 1945 authorizations...................	2	$ 1,200.00
Awards or settlements subsequent to awards on old authorizations....................	16	51,567.98
Total awards or settlements subsequent to awards approved during 1945..............	18	$ 52,767.98
TOTAL NUMBER OF PARCELS SETTLED DURING 1945		
Agreements................................	202	$ 598,575.14
Awards or settlements subsequent to awards	18	52,767.98
Total number parcels settled during 1945..	220	$ 651,343.12
TOTAL NUMBER OF PARCELS AND AMOUNTS AUTHORIZED FOR CONDEMNATION DURING 1945...	53	$ 191,146.78
Of this number 12 parcels were settled by agreement and 2 parcels on which awards were approved, leaving 39 parcels authorized during 1945 which are still pending.		
TOTAL NUMBER OF PARCELS ACTED ON BY THE COMMISSIONER DURING 1945. (INCLUDES NET CONDEMNATIONS AUTHORIZED)		
Total number of agreements approved.......	202	$ 598,575.14
Total number of awards or settlements subsequent to awards......................	18	52,767.98
Total number of net condemnations pending on 1945 authorizations...................	39	149,071.78
	259	$ 800,414.90
TOTAL NUMBER OF PARCELS AUTHORIZED FOR CONDEMNATION WHICH ARE STILL PENDING.		
Authorizations previous to Jan. 1, 1945 which are still pending..................	84	$ 103,695.27
Authorized during 1945 (still pending)....	39	149,071.78
Total number of parcels authorized for condemnation which are still pending......	123	$ 252,767.05
OPEN CASES NEVER ACTED ON.................	717	

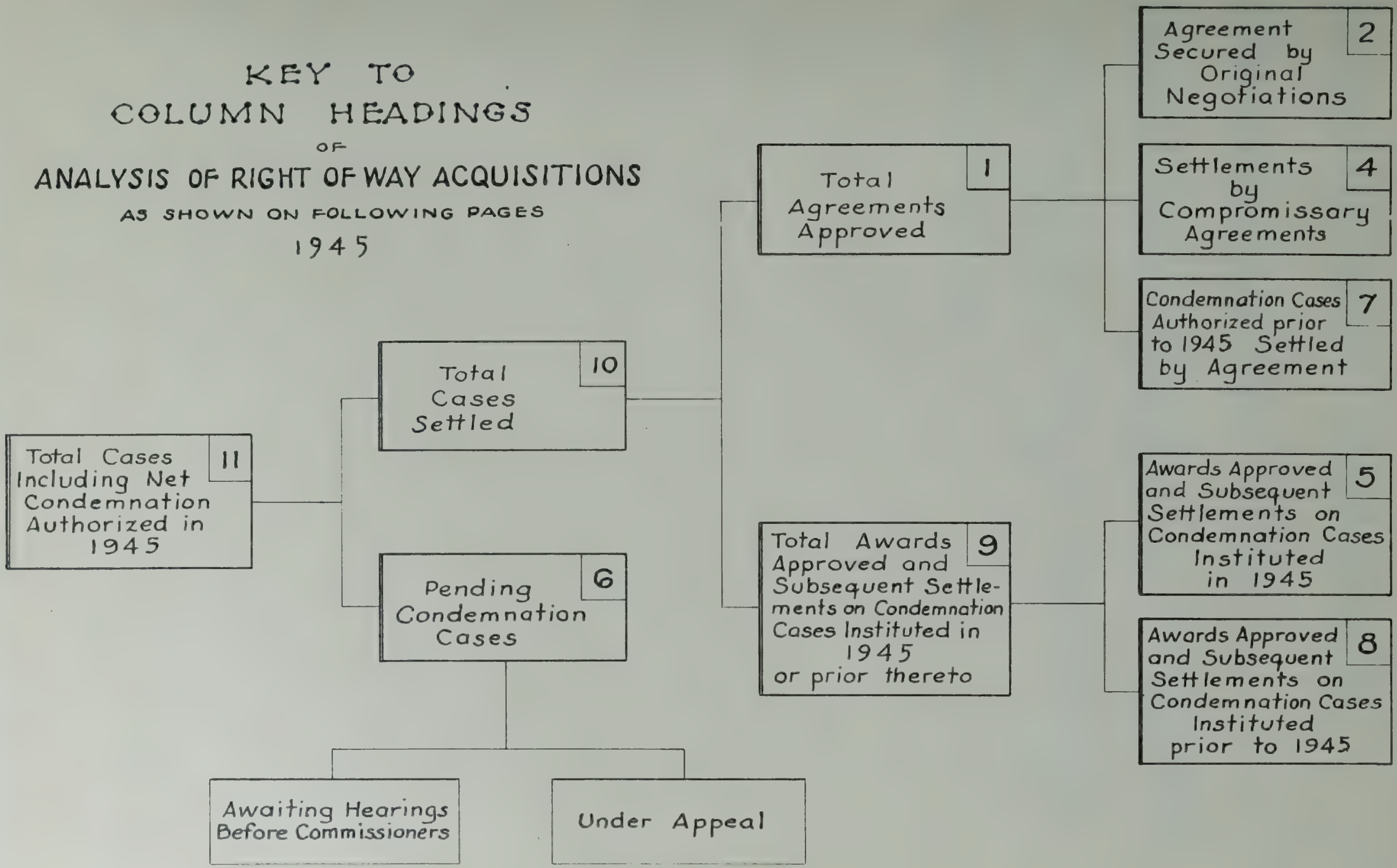
KEY TO COLUMN HEADINGS

OF

ANALYSIS OF RIGHT OF WAY ACQUISITIONS

AS SHOWN ON FOLLOWING PAGES

1945


Total Cases Including Net Condemnation Authorized in 1945 11
Total Cases Settled 10
Pending Condemnation Cases 6
Awaiting Hearings Before Commissioners
Under Appeal
Total Agreements Approved 1
Total Awards Approved and Subsequent Settlements on Condemnation Cases Instituted in 1945 or prior thereto 9
Agreement Secured by Original Negotiations 2
Settlements by Compromissary Agreements 4
Condemnation Cases Authorized prior to 1945 Settled by Agreement 7
Awards Approved and Subsequent Settlements on Condemnation Cases Instituted in 1945 5
Awards Approved and Subsequent Settlements on Condemnation Cases Instituted prior to 1945 8

3 = Total number of Condemnation Cases authorized in 1945. (Includes cases listed under Nos. 4 5 & 6

12 = Condemnation Cases still pending in 1945, which were authorized prior to 1945.

13 = Total Condemnation Cases Pending. (Includes cases listed under Nos. 6 12

14 = Number of properties required on authorized projects still under negotiation.

ANALYSIS OF RIGHT OF WAY ACQUISITION 1945

ROUTE NUMBERS		1 TOTAL AGREEMENTS		2 ORIGINAL AGREEMENTS		CONDEMNATION								OLD CONDEMNATION SETTLED IN				9 TOTAL AWARDS APPROVED OR SETTLEMENTS SUBSEQUENT TO AWARDS		10 TOTAL SETTLED CASES		11 TOTAL CASES INCLUDING NET CONDEMNATIONS AUTHORIZED		12 AUTHORIZED BEFORE JAN. 1ST OLD CONDEMNATION CASES PENDING		13 TOTAL CONDEMNATION CASES PENDING		14 OPEN CASES
						3 TOTAL CONDEMNATIONS AUTHORIZED		4 SETTLED BY COMPROMISORY AGREEMENTS		5 APPROVED AWARDS OR SETTLEMENTS SUBSEQUENT TO AWARDS		6 PENDING		7 BY AGREEMENT		8 BY AWARD OR SUBSEQUENT TO AWARDS												
ROUTE	SECTION	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.
Naval Closure Road	2 & 3	1	680.25	1	680.25															1	680.25	1	680.25					1
Constable Hook Access Road																												1
Ft. Dix Access Road	1	1	2,500.00											1	2,500.00					1	2,500.00	1	2,500.00					
Ft. Dix Access Road	2															1	185.00	1	185.00	1	185.00	1	185.00					
1	1	1	180.00	1	180.00															1	180.00	1	180.00					1
1	2					1	720.00					1	720.00									1	720.00			1	720.00	
1	4D																											2
1	Bergen Tpk.																											1
1	Pt. Lookout Cut-Off																											1
1 Ext.	14B																											2
2	9A																											1
3	1B & 2D	4	10,735.50	4	10,735.50	3	480.00					3	480.00							4	10,735.50	7	11,215.50			3	480.00	8
3	4A																							1	321.60	1	321.60	
3(1917)	10					1	200.00					1	200.00									1	200.00			1	200.00	1
3(1917)	12																											1
3(1917)	13																											1
8-3	1															1	540.72	1	540.72	1	540.72	1	540.72	5	1,725.64	5	1,725.64	4
8-3	3	1	5,000.00			2	32,657.30					2	32,657.30	1	5,000.00					1	5,000.00	3	37,657.30			2	32,657.30	8
8-3	4	12	48,580.00	10	37,280.00	9	38,563.50			1	7,500.00	8	31,063.50	2	11,300.00	1	850.00	2	8,350.00	14	56,930.00	22	87,993.50			8	31,063.50	7
8-3	5	14	102,685.00	12	65,600.00	2	6,204.00	1	6,085.00			1	119.00	1	31,000.00	4	14,895.76	4	14,895.76	18	117,580.76	19	117,699.76			1	119.00	2
4	38	15	34,070.00	15	34,070.00															15	34,070.00	15	34,070.00					3
4	41																											1
4	42					1	75.00					1	75.00									1	75.00			1	75.00	
4	44	4	17,850.00	3	11,700.00	1	6,150.00	1	6,150.00											4	17,850.00	4	17,850.00					1
		53	222,280.75	46	160,245.75	20	85,049.80	2	12,235.00	1	7,500.00	17	65,314.80	5	49,800.00	7	16,471.48	8	23,971.48	61	246,252.23	78	311,567.03	6	2,047.24	23	67,362.04	47

ANALYSIS OF RIGHT OF WAY ACQUISITION 1945

ROUTE NUMBERS		1 TOTAL AGREEMENTS		2 ORIGINAL AGREEMENTS		CONDEMNATION								OLD CONDEMNATION SETTLED IN				9 TOTAL AWARDS APPROVED OR SETTLEMENTS SUBSEQUENT TO AWARDS		10 TOTAL SETTLED CASES		11 TOTAL CASES INCLUDING NET CONDEMNATIONS AUTHORIZED		12 AUTHORIZED BEFORE JAN. 1ST OLD CONDEMNATION CASES PENDING		13 TOTAL CONDEMNATION CASES PENDING		14 OPEN CASES
						3 TOTAL CONDEMNATIONS AUTHORIZED		4 SETTLED BY COMPROMISORY AGREEMENTS		5 APPROVED AWARDS OR SETTLEMENTS SUBSEQUENT TO AWARDS		6 PENDING		7 BY AGREEMENT		8 BY AWARD OR SUBSEQUENT TO AWARDS												
ROUTE	SECTION	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.
S-4B	1																							1	808.50	1	808.50	5
S-4B	2																											5
S-4B	3																											2
S4 Outerbridge		1	40.00	1	40.00															1	40.00	1	40.00					
4 Conn. Somers	Pt.																							1	50.00	1	50.00	
4	Union-Rahway																							1	19,687.00	1	19,687.00	3
6	3	1	1.00	1	1,00															1	1.00	1	1.00					1
6	7																											2
6	8																											1
6	9	2	26,300.00	2	26,300.00															2	26,300.00	2	26,300.00	4	3,191.25	4	3,191.25	3
6	21																							1	1,707.60	1	1,707.60	1
6	22	2	2,400:00	2	2,400.00															2	2,400.00	2	2,400.00					45
6	23	5	16,740.00			7	43,012.75	3	15,150.00			4	27,862.75	2	1,590.00					5	16,740.00	9	44,602.75	2	15,500.00	6	43,362.75	4
6	24	5	1,955.00	5	1,955.00															5	1,955.00	5	1,955.00					11
7	8	1	75.00	1	75.00															1	75.00	1	75.00					
9	8	1	1.00	1	1.00															1	1.00	1	1,00					
15	8																							1	270.00	1	270.00	
17	2	1	750.00	1	750.00															1	750.00	1	750.00					
18	1	1	500.00	1	500.00															1	500.00	1	500.00	3	626.30	3	626.30	
18	2																											1
18S	16	1	1.00	1	1.00															1	1.00	1	1.00					2
18S	19																							1	10.00	1	10.00	
20	5																							1	50.00	1	50.00	
20	7																							1	50.00	1	50.00	
		21	48,763.00	16	32,023.00	7	43,012.75	3	15,150.00			4	27,862.75	2	1,590.00					21	48,763.00	25	76,625.75	17	41,950.65	21	69,813.40	86

ANALYSIS OF RIGHT OF WAY ACQUISITION 1945

ROUTE NUMBERS		1 TOTAL AGREEMENTS		2 ORIGINAL AGREEMENTS		CONDEMNATION 3 TOTAL CONDEMNATIONS AUTHORIZED		4 SETTLED BY COMPROMISORY AGREEMENTS		5 APPROVED AWARDS OR SETTLEMENTS SUBSEQUENT TO AWARDS		6 PENDING		OLD CONDEMNATION SETTLED IN 7 BY AGREEMENT		8 BY AWARD OR SUBSEQUENT TO AWARDS		9 TOTAL AWARDS APPROVED OR SETTLEMENTS SUBSEQUENT TO AWARDS		10 TOTAL SETTLED CASES		11 TOTAL CASES INCLUDING NET CONDEMNATIONS AUTHORIZED		12 AUTHORIZED BEFORE JAN. 1ST OLD CONDEMNATION CASES PENDING		13 TOTAL CONDEMNATION CASES PENDING		14 OPEN CASES
ROUTE	SECTION	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.
21	1																											1
21	4A																											2
21	4B-C																											6
21-25-29																												1
24 24N	22 1	5	1,264.00	5	1,264.00															5	1,264.00	5	1,264.00	1	279.95	1	279.95	2
25	3D & 1A																											1
25	4																							1	13,983.00	1	13,983.00	
25	5															1	75.00	1	75.00	1	75.00	1	75.00					
25	11	1	150.00	1	150.00															1	150.00	1	150.00					
25	12																							1	5.00	1	5.00	
25	16c	7	20,795.00	7	20,795.00	6	31,958.28					6	31,958.28							7	20,795.00	13	52,753.28			6	31,958.28	26
25	23																											1
25	29																											3
25	32															1	16,000.00	1	16,000.00	1	16,000.00	1	16,000.00					6
25	33					1	100.00					1	100.00									1	100.00			1	100.00	
25	34N	1	126,500.00											1	126,500.00					1	126,500.00	1	126,500.00	5	16,828.48	5	16,828.48	3
25	35																											4
25A		1	7,500.00	1	7,500.00															1	7,500.00	1	7,500.00					
25 C.L.	2 & 3																							1	190.00	1	190.00	
25 C.L.	4 & 5																											1
26 & 29	Ext.	1	1.00	1	1.00															1	1.00	1	1.00					
26	3																											1
26	4																							1	1.00	1	1.00	
26 & 27	Circle Calhoun	Conn. St.																						1	74.00	1	74.00	
		16	156,210.00	15	29,710.00	7	32,058.28					7	32,058.28	1	126,500.00	2	16,075.00	2	16,075.00	18	172,285.00	25	204,343.28	11	31,361.43	18	63,419.71	58

ANALYSIS OF RIGHT OF WAY ACQUISITION 1945

ROUTE NUMBERS		1 TOTAL AGREEMENTS		2 ORIGINAL AGREEMENTS		CONDEMNATION								OLD CONDEMNATION SETTLED IN				9 TOTAL AWARDS APPROVED OR SETTLEMENTS SUBSEQUENT TO AWARDS		10 TOTAL SETTLED CASES		11 TOTAL CASES INCLUDING NET CONDEMNATIONS AUTHORIZED		12 AUTHORIZED BEFORE JAN. 1ST OLD CONDEMNATION CASES PENDING		13 TOTAL CONDEMNATION CASES PENDING		14 OPEN CASES
						3 TOTAL CONDEMNATIONS AUTHORIZED		4 SETTLED BY COMPROMISORY AGREEMENTS		5 APPROVED AWARDS OR SETTLEMENTS SUBSEQUENT TO AWARDS		6 PENDING		7 BY AGREEMENT		8 BY AWARD OR SUBSEQUENT TO AWARDS												
ROUTE	SECTION	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.
26 & 27	Ext.	1	1.00	1	1.00															1	1.00	1	1.00					
28	22																											3
28	24	4	4.00	4	4.00															4	4.00	4	4.00	1	25.00	1	25.00	1
S-28	1																											1
28-24 C.L.	1 & 2	1	10.00	1	10.00															1	10.00	1	10.00	1	50.00	1	50.00	
28-29 Conn.	1A																											16
29	2D	2	1,650.00	2	1,650.00	1	4,500.00			1	4,500.00							1	4,500.00	3	6,150.00	3	6,150.00	2	180.00	2	180.00	
29	2B	2	1,600.00	1	710.00	1	890.00	1	890.00											2	1,600.00	2	1,600.00					
29	3B-1C-2C	1	100.00	1	100.00											1	1,335.00	1	1,335.00	2	1,435.00	2	1,435.00					
29	3C	1	38,000.00	1	38,000.00															1	38,000.00	1	38,000.00					
29	4W																											5
29	6	1	35.00	1	35.00															1	35.00	1	35.00					1
29	7B																											1
29	9																							1	70.00	1	70.00	
30	2A																											1
30	9	1	50.00	1	50.00															1	50.00	1	50.00					
31	5																											1
31	6																											1
31	11																											2
S-31	5	2	12,182.00			1	19,605.00					1	19,605.00	2	12,182.00	1	17,000.00	1	17,000.00	3	29,182.00	4	48,787.00	1	13,010.00	2	32,615.00	1
33-35 C. L.	1	3	490.00			1	50.00	1	50.00					2	440.00					3	490.00	3	490.00					
34	3W																											1
34	4																							1	33.10	1	33.10	
34	6 & 7W	19	13,050.80	17	12,725.80	4	624.10	2	325.00			2	299.10							19	13,050.80	21	13,349.90	1	175.00	3	474.10	8
		38	67,172.80	30	53,285.80	8	25,669.10	4	1,265.00	1	4,500.00	3	19,904.10	4	12,622.00	2	18,335.00	3	22,835.00	41	90,007.80	44	109,911.90	8	13,543.10	11	33,447.20	43

ANALYSIS OF RIGHT OF WAY ACQUISITION 1945

						CONDEMNATION								OLD CONDEMNATION SETTLED IN														
ROUTE NUMBERS		1 TOTAL AGREEMENTS		2 ORIGINAL AGREEMENTS		3 TOTAL CONDEMNATIONS AUTHORIZED		4 SETTLED BY COMPROMISORY AGREEMENTS		5 APPROVED AWARDS OR SETTLEMENTS SUBSEQUENT TO AWARDS		6 PENDING		7 BY AGREEMENT		8 BY AWARD OR SUBSEQUENT TO AWARDS		9 TOTAL AWARDS APPROVED OR SETTLEMENTS SUBSEQUENT TO AWARDS		10 TOTAL SETTLED CASES		11 TOTAL CASES INCLUDING NET CONDEMNATIONS AUTHORIZED		12 AUTHORIZED BEFORE JAN 1ST OLD CONDEMNATION CASES PENDING		13 TOTAL CONDEMNATION CASES PENDING		14 OPEN CASES
ROUTE	SECTION	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.
35	1																							1	60.00	1	60.00	
35	8A																											2
35	9																											1
35	10																							1	500.00	1	500.00	
35	38	1	326.00			1	100.00					1	100.00	1	326.00					1	326.00	2	426.00			1	100.00	
35	39																											2
35 to 33	Asbury Ave. Conn.															2	80.00	2	80.00	2	80.00	2	80.00					
35 Ext.	12-13-14	1	75.00	1	75.00															1	75.00	1	75.00	1	500.00	1	500.00	1
36	3																							1	10.00	1	10.00	
37	14																											1
39	1A & 10	3	2,701.00	2	1,501.00	1	1,200.00	1	1,200.00											3	2,701.00	3	2,701.00					
39	1C & 2A	3	8,675.00	1	25.00									2	8,650.00	1	100.00	1	100.00	4	8,775.00	4	8,775.00	1	127.10	1	127.10	
40	2W																							2	282.80	2	282.80	9
40	5B															2	506.50	2	506.50	2	506.50	2	506.50	1	120.75	1	120.75	
40	6A																											1
40	10 & 11W	1	2,000.00	1	2,000.00															1	2,000.00	1	2,000.00	1	30.00	1	30.00	6
41	2																											1
S-41	1A	4	4,450.00	3	2,450.00									1	2,000.00					4	4,450.00	4	4,450.00					
S-41	1W	2	2,000.00	2	2,000.00															2	2,000.00	2	2,000.00					28
43	12A																							1	4.50	1	4.50	2
43	15	9	12,105.00	9	12,105.00															9	12,105.00	9	12,105.00					342
44	2A-4A & 7																							1	490.00	1	490.00	
44	2B-4B & 7B																											16
44	4																							1	25.00	1	25.00	
		24	32,332.00	19	20,156.00	2	1,300.00	1	1,200.00			1	100.00	4	10,976.00	5	686.50	5	686.50	29	33,018.50	30	33,118.50	12	2,150.15	13	2,250.15	412

ANALYSIS OF RIGHT OF WAY ACQUISITION 1945

ROUTE NUMBERS		1 TOTAL AGREEMENTS		2 ORIGINAL AGREEMENTS		CONDEMNATION								OLD CONDEMNATION SETTLED IN				9 TOTAL AWARDS APPROVED OR SETTLEMENTS SUBSEQUENT TO AWARDS		10 TOTAL SETTLED CASES		11 TOTAL CASES INCLUDING NET CONDEMNATIONS AUTHORIZED		12 AUTHORIZED BEFORE JAN. 1ST OLD CONDEMNATION CASES PENDING		13 TOTAL CONDEMNATION CASES PENDING		14 OPEN CASES
						3 TOTAL CONDEMNATIONS AUTHORIZED		4 SETTLED BY COMPROMISORY AGREEMENTS		5 APPROVED AWARDS OR SETTLEMENTS SUBSEQUENT TO AWARDS		6 PENDING		7 BY AGREEMENT		8 BY AWARD OR SUBSEQUENT TO AWARDS												
ROUTE	SECTION	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.
44	9	1	75.00	1	75.00															1	75.00	1	75.00	1	400.00	1	400.00	1
S-44	1																											1
45 44	22 9A	26	68,717.94	26	68,717.94	2	3,362.25					2	3,362.25							26	68,717.94	28	72,080.19			2	3,362.25	16
47	2	1	133.65	1	133.65															1	133.65	1	133.65	1	1.00	1	1.00	
47	12																							1	1,087.00	1	1,087.00	
48	23																							1	744.88	1	744.88	
48	24																							2	125.00	2	125.00	1
49	13W					1	19.60					1	19.60									1	19.60	1	40.00	2	59.60	
49	Drainage	17	1,525.00	15	1,300.00	6	675.00	2	225.00			4	450.00							17	1,525.00	21	1,975.00			4	450.00	4
S-49	5	1	250.00											1	250.00					1	250.00	1	250.00					
54	1	3	700.00	3	700.00															3	700.00	3	700.00	12	5,413.97	12	5,413.97	4
54	2	1	415.00	1	415.00															1	415.00	1	415.00	11	4,830.85	11	4,830.85	44
Totals		50	71,816.59	47	71,341.59	9	4,056.85	2	225.00			7	3,831.85	1	250.00					50	71,816.59	57	75,648.44	30	12,642.70	37	16,474.55	71
Total	Sheet 1	53	222,280.75	46	160,245.75	20	85,049.80	2	12,235.00	1	7,500.00	17	65,314.80	5	49,800.00	7	16,471.48	8	23,971.48	61	246,252.23	78	311,567.03	6	2,047.24	23	67,362.04	47
"	" 2	21	48,763.00	16	32,023.00	7	43,012.75	3	15,150.00			4	27,862.75	2	1,590.00					21	48,763.00	25	76,625.75	17	41,950.65	21	69,813.40	86
"	" 3	16	156,210.00	15	29,710.00	7	32,058.28					7	32,058.28	1	126,500.00	2	16,075.00	2	16,075.00	18	172,285.00	25	204,343.28	11	31,361.43	18	63,419.71	58
"	" 4	38	67,172.80	30	53,285.80	8	25,669.10	4	1,265.00	1	4,500.00	3	19,904.10	4	12,622.00	2	18,335.00	3	22,835.00	41	90,007.80	44	109,911.90	8	13,543.10	11	33,447.20	43
"	" 5	24	32,332.00	19	20,156.00	2	1,300.00	1	1,200.00			1	100.00	4	10,976.00	5	686.50	5	686.50	29	33,018.50	30	33,118.50	12	2,150.15	13	2,250.15	412
"	" 6	50	71,816.59	47	71,341.59	9	4,056.85	2	225.00			7	3,831.85	1	250.00					50	71,816.59	57	75,648.44	30	12,642.70	37	16,474.55	71
Grand	Total	202	598,575.14	173	366,762.14	53	191,146.78	12	30,075.00	2	12,000.00	39	149,071.78	17	201,738.00	16	51,567.98	18	63,567.98	220	662,143.12	259	811,214.90	84	103,695.27	123	252,767.05	717

January 23, 1946.

Honorable Spencer Miller, Jr.,
State Highway Commissioner.

There is respectfully submitted report, covering the calendar year 1945, concerning the operations of the Title Bureau in the acquisition of lands by the State of New Jersey for its use in the construction of the State Highway System.

During 1945, the State Highway Commissioner approved 205 ($676,378.62) purchase contracts and 16 ($37,061.50) condemnation awards, a total of $713,440.12; 354 title investigations and 658 continuations thereof were made in the several county offices and abstracts of title prepared; 122 proceedings in the office of the Clerk in Chancery were examined and abstracts prepared; Judgment searches were made in the respective offices of the Clerks of the New Jersey Supreme Court and the United States District Court against 1948 persons; abstracts of title were analyzed and 214 reports of title prepared; 361 instruments of conveyance were prepared and furnished to the State's vendors for their use; 262 executed instruments were recorded in the offices of the several County Clerks and Registers; 224 claims were certified to the Comptroller, and payment made to the State's vendors in 204 cases (whereof 78 were represented by attorneys) aggregating $629,768.10, 155 by mail, 31 at the office of the Title Bureau, and 18 at the office of the vendor's attorney, at the vendor's bank, or residence, and in 20 cases ($15,715.22) condemnation awards were paid into the Court of Chancery. In addition, 569 legal notices in connection with condemnation proceedings were served on the parties in interest, 554 special investigations were made for the purpose of obtaining necessary information not of record, 114 inheritance tax waivers were abstracted, 105 death and marriage records were investigated in the Bureau of Vital Statistics, and 32 banking records were investigated in the Department of Banking and Insurance.

Frederick Vollmer
Title Officer.

ED/LN

Hon. Spencer Miller, Jr.
State Highway Commissioner

Dear Commissioner:

The following is a summary of the work accomplished my the Compensation and Claims office from January 1, 1945 to January 1, 1946:

Damage Claims

290 Claims Pending
35 District Court (Pending)
1 Common Pleas (Pending)
42 Negligence cases forwarded to Attorney General's office for the institution of suit
80 Claims Cancelled after investigation disclosed them to be uncollectible
(Drawing various legal pleadings in connection with the above)
117 Damage reports received, examined and in some cases investigated
226 Damage claims examined and authorized for billing
8 Damage claims disapproved for billing
254 House and business calls made in connection with investigation and collection of damage claims
75 Police reports secured for other divisions
92 Claims settled and paid amounting to $9063.79
41 Claims upon which part payment has been received, 19 of which were final payments, amounting to 1696.01
15 Third party claims recovered amounting to . 8625.49
$19,385.29

Workmen's Compensation Cases

34 Cases closed out by settlement, or by decision of the Workmen's Compensation Bureau, after hearings, either formal or informal
10 Pending cases now in Workmen's Compensation Bureau
1 Pending cases in Court of Common Pleas
286 Personal injury reports received, examined and in some cases investigated

Miscellaneous

Miscellaneous cases involving investigations of maritime accidents involving our bridges, interviews between employees and insurance company representatives, investigations and reports

in connection with discharge and removal of employees from service; obtaining statements and affidavits from witnesses; preparing for hearings in connection with dismissals on charges; conducting investigations with reference to personnel matters; investigations of liability for medical and hospital bills, adjustment of medical and hospital bills; legal memoranda; serving notices and briefs in connection with workmen's compensation matters; etc.

Reports of First Aid rendered - received, examined and recorded	79
Issuance of First Aid replacements for First Aid Kits by order	64
Total medical and physical examinations	431
Office calls upon doctors in connection with injured employees or employees absent on sick leave	100
House calls or hospital visits made on employees injured in line of duty	144
House calls made upon employees absent on sick leave	95
Attendance at offices of medical examiners in connection with examination of employees in compensation cases or in determining medical and physical condition	22

Hearings attended:	Informal	43	
	Formal	21	
	Civil Service	1	
		Total	65

Releases approved as to form and obtained execution	20
Releases drawn for other divisions	35
Through correspondence, reductions obtained in medical bills	$111.00

Respectfully submitted,

Charles I. Levine

Charles I. Levine
Claims Supervisor